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OUR FAMILY STORY

Stories of Our Ancestry, Our Growing Years;

And Our Home and Professional Life

In a Changing America

By

George W. and Edith F. Sears

With Foreword by George W. Sears

Reno, Nevada

1961



GEORGE W. SEARS

AND

EDITH F. SEARS

JUNE 20, 1911

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Foreword

As children on a Missouri farm we had learned very little of our forebears. Both Father and Mother had migrated west from their New York homes, each being influenced by the spirit of adventure. For the most part each had left family and friends behind. About the only information we children had of our ancestry, therefore, was through the stories they told us of their early lives, and the occasional exchange of letters with their folks back home. It may have been due to this scant information that I grew up with little or no interest in my own genealogical lineage but rather with a firm belief that whatever I should become would depend on my own ambition and efforts rather than on anything my forebears had been.

In contrast with this general lack of interest in my ancestry, my wife, Edith, who had been in close touch with her grandparents as well as with uncles, aunts and cousins, throughout her girlhood years, had developed a keen interest in where and from whom they came, and had collected a good deal of information concerning them. It was perhaps through her interest in this, and through information gained from "The Sears Genealogy" belonging to my brother Norman, that I began to give any thought to my ancestry. My interest in any written record of myself or of my own family was little indeed, until in 1916, when we children had begun to develop our own homes and Father and Mother were left pretty much alone. It was then that we conceived the idea of each writing the story of his own life up to that time and sending it to them in commemoration of their forty-fifth wedding anniversary.

It was in the spring of 1950, while Edith and I were at Deep Springs School in southern California when circumstances gave her a good deal of leisure time, that she undertook at the request of our children to organize the information she had collected and include it in a story of our own family life. The year 1950 also witnessed the death of my brother Norman and a renewal of interest in the Sears genealogy by my two older brothers. By this time, however, their interests had shifted to the desirability of gathering the necessary data and putting it together as a family history.

This idea attracted my interest largely because our family had grown up as a closely knit group, had maintained an interest in each other through the years, had helped each other when help was needed and had always been interested in each other's successes as well as failures. Although this idea did not materialize as originally planned, it did result in my preparing the necessary data for my part of the history. Edith had by then completed her story of our family life, which she had begun in 1950. The question arose, therefore, as to how we might preserve all this for our children.

Instead of combining these two into a single story of our family and its activities, we chose rather to include them as separate phases of our life: her story, to remain as the record of her parentage, her growing up and our family life together; mine, to follow as a record of my parents, my life on the farm, my education and professional life. The latter, therefore, will contain only such information of our family life as is deemed essential to clarity. Both have been developed in simple narrative form from which the reader may be expected to recognize the writers for what they were. The more I thought of this approach the more I became aware of the very great change in American life that has been going on since my father started out as a young man. While this change has come along with the developments in science, it has affected not only man's way of living, but also his way of thinking, his attitude toward life and even his philosophy of life.

Looking back into history, one cannot help but note the rapidly increasing rate of change now in progress. In view of this fact, it appears not unlikely that a story such as that shown in the following pages may well have value beyond that of interest to our own children, for whom this has been written. The story, if supplemented by each oncoming generation, would doubtless reveal how one's parents or grandparents met these changes, and would show the resulting effects. The reading of it by some future grandchild might well suggest an effective way of meeting the changes of his or her time. At any rate, we have enjoyed the time spent in putting these stories together and trust that our children and grandchildren will find enjoyment in reading them.

Reno, Nevada

George W. Sears

CONCERNING THE SEARS ANCESTRY IN AMERICA

The name Sears was used exclusively for the first time by the children of Richard Sayer or Sears, known as RICHARD THE PILGRIM, founder of the American branch of our family. He was born in Amsterdam, Holland in 1590, the second son of John Bouchier Sayer and his wife Maria L. Egmond. His great grandfather, Richard the Exile had settled in Holland following his escape from England in 1537, during the height of the Inquisition and religious controversy in England.

The Exile's wife, "Lady Anne Bouchier Knyvet was connected by her maternal grandmother with the Bouchiers whose line runs back directly to Edward III." (1)

(1) { "Pictures of Olden Times," Edmund H. Sears, 1857, a copy of which is in the family of my older brother, C. Norman Sears.

The following families show the names through which our family has descended in unbroken line from Richard the Pilgrim, Roman numerals being used to indicate the generation.

I. RICHARD THE PILGRIM, while in Holland, joined a small Protestant group, a part of which were the Mayflower passengers who landed at Plymouth Rock in 1620. It was not until 1630, however, that Richard and the last of the group left Holland and joined those at Plymouth, Mass. In 1632, he married Dorothy Thacher. In 1662 he became a member of the Colony Court. His name appears among the most highly rated Plymouth colonists. He died in 1676, his wife in 1680. Their children were 1. Knyvet, 2. Paul, 3. Silas, 4. Deborah.

II. SILAS SEARS, b. 1639, wife not known, died in Yarmouth 1697, leaving children as follows: 1. Silas, 2. Thomas, 3. Richard, 4. Hannah, 5. Joseph, 6. Josiah, 7. Elizabeth, 8. Dorrity.

- III. SILAS SEARS, b. 1669 in Yarmouth, m. Sarah Crosby a daughter of Rev. Thomas Crosby, a graduate of Harvard College. Their children were 1. Phebe, 2. Silas, 3. Sarah, 4. Hannah, 5. Thomas, 6. James, 7. Eleazer.
- IV. JAMES SEARS, b. 1704, m. Desire Tobey, had a son David.
- V. DAVID SEARS, b. 1731 in Yarmouth, m. Mary Paddock, d. 1827 in Lenox, Mass. had a son Isaac.
- VI. ISAAC SEARS, b. 1768, m. Priscilla Bennett, his second wife and by her had a son Charles.
- VII. CHARLES SEARS, b. 1803 in Lenox, Mass., m. Ursula Abernathy, d. 1885 in Madrid, N. Y. Their children were 1. Charlotte, 2. Chauncey, 3. William Wallace, 4. Ellen Maria, 5. Andrew Jackson. *My father Charles B. Sears - Jan. 2 - 8. 1872.*
- VIII. WILLIAM WALLACE SEARS, b. 1836, m. Angeline Augusta Johnson in 1871. Their children were 1. Charles Benton, 2. Clarence Norman, 3. Jesse Brundage, 4. George Wallace, 5. Bertha Laura, 6. Harry Johnson, 7. Clara Geneva, 8. Dean Leslie.
- IX. GEORGE WALLACE SEARS, b. 1878, m. Edith Clementine Fink. Their children were 1. Howard William, 2. George Wallace, 3. Margaret Marie.

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The following information concerning the parentage of Angeline Augusta Sears, as told by her, includes her grandmother, Hannah King.

- I. HANNAH KING, b. in Mass. of Puritan stock, m. Orrin Hall. Their children were 1. Laura, 2. Dorothy, 3. died in infancy, 4. Orvilla, 5. & 6. Salome & Saphrona, twins, 7. Harriet, 8. William, 9. Asaph.

II. LAURA HALL HOWE, m Henry Johnson whose children by a first wife were 1. Fannie, 2. Orpha, 3. Charlotte, 4. Lucina, 5. Martha, 6. Sanford. They had a daughter, Angeline Augusta.

III. ANGELINE AUGUSTA JOHNSON, b. 1846, m. William Wallace Sears in 1871, d. 1923. For children see VIII above. It may be noted here that when Angie and her mother came to Missouri, it was to make their home with Angie's cousin Harriet and her husband, Jack Brundage. Harriet's mother was Laura Hall's sister Dorothy (See I above) and our cousin "Caddie" was the daughter of Salome, another of Laura Hall's sisters.

CR
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BOOK ONE

THE STORY OF OUR FAMILY LIFE

Including Memories of My Forebears and Girlhood Years

By

Edith Fink Sears

PART I

MY ANCESTRY AND GIRLHOOD YEARS

11/12/63 - CRB

Reno, Nevada

Dear Children:

You have asked me to tell you about your forebears, their lives, ideals and fortunes--what manner of people they were. Their diversity indeed has been very great, having ranged from very probable ancient royalty in old England, to many of "lowly estate." Your father was listed in "Who's Who in America," "American Men of Science" and certain other allied classifications. And on the other extreme, as far as my knowledge goes, there are and have been no "skeletons in the closet" upon which the door of secrecy must be kept shut.

On your mother's side of the family you have stemmed from English, Scotch, Irish and German stock; on your father's, from English and Scotch. Though their diversity has been very great, your ancestors have been, in the main, people of high ideals, industry and ambition to do well their work in the world, and to leave their little corner of it better than they found it.

I was born in the little town of Lamar, Barton county, Missouri, on Dec. 13, 1885, the first of four children born to Richard Marriot Fink and his wife, Sallie Edith (Harris) Fink, and was named Edith Clementine for my mother and for my father's beloved sister "Clem." My father--Papa, we called him--owned a drug store in Lamar. He had been a student for two years at the University of Missouri, taking a "pre-med" course, intending to become a doctor, but being already in his late twenties, and wanting to get married, was persuaded to give up the long hard road to the M.D. degree, and enter into partnership with Mamma's oldest brother, Richard Harris, in the drug business in Deep Water, Missouri, where "Uncle Dick" was already established.

After he and Mamma were married (on Thanksgiving Day of 1884) they went to live in Lamar, where Papa opened his own drug store. A little over a year later I was born.

On May 1, 1887 my brother, Charles Harris, always called Harris, was born; and on Dec. 17, 1889, Margaret Lucille, whom we always called Madge. When I was about six years old, we moved to Springfield, Missouri, where Papa had bought a new drug store. About two years after we had moved there, my youngest brother, Frederick Edward, was born, April 3, 1894.

THE FINK FAMILY

Before going on with the story of my girlhood I will go back and pick up the threads of my ancestry. My father, Richard M. (Dick) Fink and his twin sister, Mattie, were born in the small town of Girard, Illinois on Dec. 15, 1853, the first children of Charles Hammond Fink by his second wife, Elizabeth Margaret Boggess. Charles Hammond Fink, my grandfather, was born near Lexington, Kentucky, Feb. 14, 1822, the first of seven children born to John and Matilda (Hammond) Fink. John (my great-grandfather) was born in 1791 near Frankfort, Kentucky. He came of a rugged Virginia family in which the spirit of the frontiersman was inherent. Drifting westward to Kentucky, some of them became participants along with Daniel Boone in that fierce drama of border warfare, which is a part of America's history, and which prepared the way for advancing civilization. A few generations before this, the Fink family had come to America from Germany, where the name had been Von Fink, indicating descent from Prussian nobility.

John Fink's parents (my great-great-grandparents) had ten children, John being the second. Of his nine brothers and sisters perhaps one of his younger brothers, my great-great-uncle Valentine, had the most interesting history. His parents died about 1812 when he was seven. His older brothers and sisters were grown, and some were married and settled in their own homes. To them fell the duty of bringing up the younger ones. Valentine went to live with

Henry, a paper-maker in Delaware. When scarcely grown he became restless and journeyed westward, and among Mexicans and Indians he lived a roving life of adventure. Soon, however, circumstances took him to Baltimore where he was converted, and began to study for the ministry. His first work was as a missionary to the Cherokee Indians in Indian Territory (now Oklahoma), where his youthful wanderings had taken him. After two years he went to Missouri and became a member of the Missouri Conference of the Methodist church; four years later, moving to Des Moines, Iowa, where he preached, taught school and farmed for over fifty years until the infirmities of old age caused him to retire from active work. The great desire of his heart was to "do good", and even after he had reached the age of ninety-two he counted that day lost, when either at home, or walking about the streets with the aid of a cane, visiting the sick, he had not dropped a word of hope into some receptive ear. He was affectionately known as Father Fink and, living to be ninety-four years old, outlived all his nine brothers and sisters.

To get back to my great-grandfather John Fink: he was a very tall man, and Matilda, his wife, a small woman who could easily stand under his outstretched arm. They lived in Lexington, Kentucky, where John was a shoe manufacturer, and had seven children, my grandfather, Charles Hammond, being the eldest. John and Matilda moved from Kentucky to Girard, Illinois, when my grandpa Charles was about eight years old. The little town of Girard had been founded by Barnabas Boggess, a native of Virginia, who had moved first to Kentucky and then to Illinois, just as had the Fink family. Barnabas was a lawyer and also the owner and manager of Girard's first hotel. I mention him here because he was the uncle of both my grandfather Charles Fink's first and second wives, who were sisters.

Great-grandfather John Fink took up a farm claim but kept up his shoemaking business in nearby Girard, while great-grandmother and the four boys ran the farm. Having to work so hard on the farm, Charles and his brothers had little opportunity for formal schooling, attending only at brief intervals when they could. Life was primitive indeed. There were few books and no money for

such things as paper and pencils. They used for pencils leaden bullets rolled out thin, and they bleached the jawbones and shoulder blades of horses for slates on which to write. When Charles grew up he married first in 1843 at the age of only twenty-one, a young girl of nineteen, Martha Ann Boggess, the eldest daughter of Henry and Sarah (Pitzer) Boggess, Henry being a brother of the aforesaid Barnabas Boggess. After Martha Ann's tragic death nine years later, about which I shall tell presently, Grandpa married her widowed sister, Elizabeth Margaret, my grandmother. So right here I shall tell what I know of the Boggess side of my father's family--his mother's side.

The grandparents of these two Boggess sisters were Henry Boggess I. of Botatourt county, Virginia, born in 1733, and his wife, Mary Ann Lindsey. Their son, Henry Boggess II, was born there in 1771, and married Mary Pitzer. The Boggesses and the Pitzers were fine old families of Southern aristocracy, slave owners, and people of exceptional culture. Both families had moved on into Kentucky in about 1816 while their children were growing up, so it was in Christian county, Kentucky, that Henry Boggess III, and Sarah Pitzer, my great-grandparents were married and where their oldest children were born. Later both families moved on into Illinois. They seemed to have had the true pioneering spirit; and probably slaves and fine homes were given up when they made their first move to Kentucky, certainly before moving on into Illinois.

So it was there, near the little town of Girard that my grandfather Charles Fink met and became interested in the Boggess girls, and in 1848 married the eldest, Martha Ann Boggess.

Charles and Martha Ann had three children (Clementine the aun for whom I was named, being the eldest) and for some years they lived very happily. But in September, 1851, when Aunt Clem was just a little girl, a great tragedy struck the town of Girard. An epidemic of Asiatic cholera broke out and with terrifying swiftness swept the whole town. The doctors didn't know what it was, and had no knowledge of how to combat it. People sickened

suddenly and in a few days, sometimes even within a few hours, were dead. The town was in a panic. Soon no one would go near a house where the plague had struck. Funeral services were suspended. Pine coffins, hurriedly nailed together, were dumped at front gates to receive the bodies, which were given hasty burials.

This terrible tragedy struck very heavily the family of my great-grandfather, Henry Boggess III. A bare recital of facts gives no idea of the awful calamity, the grief and terror of what happened to them in the short space of two weeks. My great-grandfather was then just fifty-three years old, and his six older children were married and settled in their own homes, the four youngest girls being still in their teens. On September fourth after this brief but terrible illness, his fifth daughter Amanda's husband, Matthew Louis Beyer, a young man of twenty-two was the first of this family to die, though friends and neighbors all around them had been dying in quick succession. Eight days later, on September twelfth Great grandpa's father, Henry Boggess II, an old man of eighty, succumbed. He himself, Henry Boggess III, died the very next day. Two days later, on the fifteenth, Mildred, the young bride of his only son Oscar, was the victim. On the sixteenth, Martha Ann, his oldest child, my grandpa Charles Fink's young wife and their two youngest children died. Grandpa himself, and little Clem were also very sick, and two coffins were placed in their yard ready for them. But Grandpa's courageous nature asserted itself, and he managed to get himself out of bed and made little Clem get up too, saying, "We will not lie here in our beds and die!" And strangely enough, both recovered while others, alas, probably used the two coffins. For on the next day, Grandpa's only brother-in-law, Oscar Boggess and his young wife, both died.

So in the space of two weeks, eight members of the Boggess and Fink families were gone, not to mention many friends, neighbors and more distant relatives. We can picture the terror and panic of this awful time in Girard only by letting our minds run riot.

Now Grandpa Charles was a young widower with a small daughter to bring up. A year or so later he married Martha Ann's widowed sister, Elizabeth Margaret Boggess Ross. I don't know whether or not her first husband, Reuben Ross, had died in the epidemic, but she was left with two small children, Sarah and George Ross. To Charles and Elizabeth Margaret were born four children, twins Mattie and Richard (my father) on Dec. 15, 1853; Virginia in 1857, and Robert in 1860.

My grandmother with six children of her own, and one step-child, only three of them (Clem, her step-daughter, and Sarah and George Ross) being old enough to give her any help, had much hard work to do, both indoors and out. Heavy and voluminous clothing for her big family must be made by hand. Water had to be carried for the big washings, which had to be scrubbed by hand on a washboard, and the clothing ironed by old-time flatirons, which had to be heated on the wood-burning kitchen stove, and for which wood had to be cut and carried in, summer and winter. They even had to make their own soap, and one cold day in February while Grandmother was thus engaged in the back yard, she caught cold, developed pneumonia, and died, Feb. 24, 1863, leaving her baby Robert, only three years old.

Now Grandpa was a widower again, with five children and two step-children. Within a few years he married, for the third time, Mary Elizabeth Trimble, whose family had recently come from England where she had been born. To this marriage were born two children, Oliver and Maude. So by a queer combination of circumstances here was a family wherein my Grandmother's daughter Sarah and son George, by Reuben Ross her first husband were Aunt Clem's cousins, (their mothers being sisters), while Aunt Clem was my father's half-sister (both having the same father) and his half-sister and half-brother, Sarah and George Ross were no relation by blood to my father's other half-sister and half-brother, Maude and Oliver! Aunt Clem, by the way, was Papa's half-sister and cousin!! And so it was that Grandpa's third wife was the only "Grandma Fink" I ever knew.

It seems that Grandpa's troubles were not yet over. They had a fine farm near Girard and were getting along well, when Grandpa who never could say no to a needy friend went bond for a large sum of money to a friend who played him false, and later skipped the country, leaving him in a very bad predicament. Hearing of a good opportunity to make a fresh start in Barton county, Missouri, Grandpa resolved to move his family there and enter the wholesale nursery business. This was in 1870 or 1871 when Papa was about seventeen or eighteen years old. Grandma with the girls and all the younger children went by train. Grandpa, Uncle Ed Trimble (Grandma's brother) and Papa, each drove a team and wagon loaded with family goods.

It was a long journey by wagon from Girard, Illinois, to Lamar, Missouri; and one night they stopped and made camp near a prosperous farm or plantation a mile or two beyond the little town of Pilot Grove, Cooper county, Missouri. Papa was sent to see whether they could buy feed for their horses, and there he met Sallie Harris, the pretty girl who was later to become my mother, for the plantation with its big house and distant row of cabins for the slaves, belonged to my maternal grandfather Edward H. Harris. A slave was sent to carry the feed, and the three men were doubtless bidden to supper, as my grandparents were very hospitable people. Sallie was only about twelve years old at this time, and it wasn't until several years later when she went to visit her two aunts, Sallie (Harris) Grayson and Mary (Harris) Combs, who lived in Lamar, that thought of love and marriage came to these young people. But doubtless this meeting had its influence.

It seems that for awhile Grandpa Fink's days of trouble and bad luck were over, for his nursery business prospered in a modest way, and he saw all of his sons and daughters grow up to become good men and women, respected and useful in the communities where they lived and happy in their own homes. He served for many years as presiding judge of the county court of Barton county, was known as Judge Fink and was highly respected and admired by those who knew him. In his later years he sold his farm and nursery which were soon to become a part of the town and be known as Fink's Addition. He bought or built a large stone house on North Gulf St. near the cottage where later I was born.

He never became wealthy, and by his very nature never could have been, for his most outstanding characteristic was his great generosity, and his desire to lend a helping hand (often accompanied by money) to anyone seeking his aid. Again he was persuaded to go bond for loans to friends who were starting a nursery business in Kansas, trusting them so implicitly that he didn't demand adequate security. And again he lost several thousand dollars. I might state right here that my father inherited this same trustfulness in human nature, and this same generosity toward those in need. I kept books for him one summer after I had finished school, and I know this to be true, for there were over \$2,000 in bills owing the drug store that had been "retired" to the back of the ledger. He never sued or brought undue pressure to cause his unfortunate or dishonest customers to pay up.

When Grandpa Fink was asked for a contribution to Drury College at Springfield, Missouri, being unable to give money he sent a carload of young oaks and elms from his nursery. These were planted on the sweeping lawns in front of Fairbanks and Pearson Halls. They grew to be the spreading trees under which your dad and I were wont to stroll many years later when we were students at Drury.

Grandpa died after a lingering illness on Jan. 6, 1901, being within a month of his seventy-ninth birthday. We had then lived in Springfield for about ten years. So my memories of Lamar come chiefly from frequent visits there throughout my girlhood, visits to Grandpa and Grandma in the big stone house, and to Uncle George and Aunt Virgie (Fink) Crenshaw in the fine big house they had built--the show-place of Lamar--and where Harris, Madge, Fred and I had many good times with our cousins Zulah, Charlie and Loren Crenshaw. Several other aunts and uncles on both Papa's and Mamma's sides of the family also lived there. So there was quite a family clan and many happy family gatherings. I might mention right here in passing that Aunt Virgie was quite an artist, having done many very lovely landscapes in oil--two or three of which hung upon the walls of our home in Springfield. Perhaps through her, Margaret, you inherited your talent for art.

THE HARRIS FAMILY

Now I must turn to Mamma's side of the family, the Harris-Ellis side. My mother, Sallie Edith Harris, was the great-great-great-great-granddaughter on her father's side of John (b. 1680) and Jane (Taliaferro) Craig of Scotland, and of John and Mary Hawkins (probably of England). John and Jane Craig came to America and settled in Virginia around 1700, where John died just four months before their son Toliver was born in 1704. (He was named Taliaferro, his mother's maiden name, but being pronounced Toliver, the name soon became as pronounced.) John and Mary Hawkins also came to America and settled in Virginia, and had among other children, a daughter Mary who was called Polly. Polly Hawkins married Toliver Craig, and to them were born eleven children. Their second child Rejoice Craig (Joice) married John Faulkner, and they had ten children. Their eighth child Frances (called Frankey) married Henry Wilson who was born around 1760, probably in North Ireland. His family was Scotch-Irish, and came to America around 1765 when he was a little boy.

Henry and Frankey lived for awhile near their parents in Virginia, but soon caught the fever, so prevalent among young folks of that time to move westward, and joined a party which was emigrating to Kentucky. There they joined the hardy pioneers who were fighting along with Daniel Boone to found homes in the Kentucky wilderness. I am not sure whether Henry came as an officer, or as one of the young engineers, or surveyors who were with the emigrating parties. But since his father was a member of the Virginia House of Burgesses, I am quite sure that he was a young man of some consequence in this group. Henry's brother John Wilson was with them also. These pioneers came either on horseback or by wagon over the new Wilderness Trail, or down the Ohio river in flat-boats. They came after Boonesborough had been settled and Fort Bryant was being formed, for they lived inside the stockade of Fort Bryant during its early days when it was besieged by the Wyandotte Indians under the leadership of the renegade Simon Girty who had deserted the American forces and gone over to the Indians and British.

A brief account of this siege might be interesting. Girty with about 600 Indians, mostly Wyandottes, had planned to attack Fort Bryant. There were only about forty or fifty men living inside the fort, not counting their families. On the morning of Aug. 16, 1782, the men of the fort were permitted to go outside the stockade to tend their outlying farms. They always carried their muskets and stacked them nearby, with one man acting as sentry. Suddenly a party of Indian brave men appeared outside the south-west gate and began such a display of firing and furious gesturing that the more experienced of the white settlers strongly suspected them of being a decoy and restrained the younger men from sallying out and attacking them immediately. They wisely deduced that the main body of attackers were hidden in the nearby woods at the opposite west, corner where the spring providing their drinking water was located.

Now it was the custom for all the grown women of the fort to march in a body each morning to this spring for the daily water supply. So the men persuaded them--with some difficulty to be confessed, for they were much frightened--to go as usual for water. They also knew that if the men went, the Indians would know their ruse had failed and would attack immediately. With much trepidation, the older women followed by the younger women, whom no doubt was Frankey (my great-great-grandmother) to the spring, knowing that back among the trees many arrows were hiding. They were not molested, even as the men were confident they wouldn't be, but we can just imagine how they held themselves in control, as one after the other, they carried buckets and turned back toward the heavy gate; and how their hearts became quicker and quicker as they approached it; and how their hearts pounded harder and harder as they crowded through the gate.

The ruse had succeeded, and being now supplied with water, thirteen young men were sent out to attack the decoy party. Orders to make as much noise as possible but to return to the fort quickly. The rest of the garrison stood ready to repulse the attackers. The attackers were outside the north-west gate, who hearing the firing, immediately retreated to the woods and hid themselves.

until mid-morning of the next day the fighting kept up, the women--
Frankey among them according to our family stories--melting
pewter dishes and from them casting bullets. Some reloaded
guns and some did their best to keep the children out of harm's
way.

Two men had been sent along with the first thirteen (who
repulsed the decoy party) to run to Lexington for help. Sixteen
horsemen and some forty or fifty on foot were sent to their aid,
but were detected by the besiegers as they approached through a
large cornfield. Immediately half the besieging party rushed to
waylay them, and a fierce battle took place in the cornfield. Most
of the white men succeeded in reaching the fort, but several were
killed on each side. Night was coming on and the Indians, dis-
couraged, gave up the siege. They abandoned their camp and went
off toward the Lower Blue Licks region. But they made feint of
doing so with great haste and terror, so badly simulated that the
pursuing whites became very wary. The Indians had even indi-
cated the path of their retreat by blazing a rather obvious trail by
hacking the trees with their tomahawks.

Still the white men had to follow in hopes of giving battle and
defeating them to prevent another attack. When they reached the
Blue Licks region--an old salt deposit where buffalo herds had for-
merly come to lick at the salt, and where the white settlers now
went to evaporate the water to get salt for domestic use and for
preserving their game--the Indians had disappeared, all but a few
who were ostentatiously showing themselves across a ravine.
Daniel Boone was in the party that had come to their aid, and he
very strongly counceled delay and caution. But a young major
(McGary) dashed into the river on horseback calling to all who
were not cowards to follow him. So many young men did follow
that Boone had to organize a hasty plan and join this attack. Indians
poured out in great numbers and the Battle of the Blue Licks was on
in good earnest. Boone's young son was killed, and also Henry's
young brother, John Wilson; was killed by one of the Indians, as he
stooped to take a hasty drink of water from the Blue Licks Spring.

Here I would like to digress and tell of an incident which led our family to believe that we are related to the Woodrow Wilson family. At the time of President Wilson's inauguration, a story was published telling of a relative, John Wilson, possibly an uncle, though I am not sure of the exact relationship who was killed by an Indian while stopping to drink from the spring during the Battle of the Blue Licks Spring. There would not have been two John Wilsons who died under such identical circumstances in this particular foray with the Indians. The relationship is therefore probably true, though the degree of cousinship is not clearly defined.

To get back to my great-great-grandparents, Henry and Frankey Wilson. Those were exciting and dangerous days in Kentucky. This attack upon Bryant's Station was the last of the major battles with the Indians however, as Governor Hamilton of Virginia granted Boone's urgent appeal for sufficient forces to put a stop to these awful attacks by sending General George Rogers Clark with a big enough army to rout most of them from Kentucky, though a few scattered forays kept occurring for a number of years.

I cannot help wondering whether Henry and Frankey Wilson might have known my Fink great-grandparents, as they were also living in Kentucky at this time, and associated in some way with Daniel Boone. Perhaps they did know each other, and perhaps they parted, not knowing that their descendants, my mother and father many years later would unite the two branches of these families. Stranger things have happened!

Be that as it may, Henry and Frankey Wilson were granted a large tract of land--about 1,000 acres--and later built a very fine house upon it. The large living room had such a huge stone fireplace in it that it accommodated a six-foot log. As each of their sons married they gave him 200 acres of this land, and built a house on it for him, thus keeping their family nearby. And in spite of all the dangerous adventures of life in those days, Henry lived to be 102 years old.

One of his daughters, Frances, married my great-grandfather, Dr. Richard Harris, also a Virginian by birth. They lived in Bourbon county, nearby, for some years, and had four children: Mary, Nathaniel (called Nat) Sallie and Edward Hazelwood, (my grandfather). All of them later moved westward to Missouri. Mary and Sallie were the aunts whom mamma as a young girl visited in Lamar--Aunt Mary (Harris) Combs and Aunt Sallie (Harris) Grayson whose husband's nephew, Dr. Cary Grayson, was Woodrow Wilson's personal physician. Grandpa's elder brother Nat, following in his father's footsteps, was a doctor. The little town of Harrison, Missouri, was named for him. One of his daughters, Cousin Lou, visited us in Reno when you children were very small, around 1929 or '30. And it was she who encouraged me to join the Daughters of the American Revolution, and furnished me with all her papers to copy for application. (She was my mother's especial girlhood companion, and a brilliant pianist in her youth.) She was the wife of Marshall Rust, had no children and was very active in the Missouri D.A.R. in her office of State Historian, which she held for many years. She was also an active member of the Daughters of the American Colonists, and urged me to organize a branch of it in Nevada, which I tried to do, but met with no interest. It has since been organized here however.

Edward Hazelwood Harris, my grandfather, the youngest of these four children married Mary Elizabeth Ellis, the fourth of the eight children of Richard Ellis and his wife Margaret Ferguson who also had come from Virginia (Orange County) where Mary Elizabeth was born. They settled near Syracuse, Missouri not far from Pilot Grove, where they had a large comfortable house on a prosperous plantation with many slaves. The youngest of the eight, my great aunt Dollie Ellis Hutchinson was still living there after I had grown up and married.

Grandpa had been born in Kentucky around 1829 but moved to Missouri as a young man where he was married. He bought a farm near Pilot Grove in Cooper county and had many slaves. When he and Grandma were married, Grandma's parents gave her a young slave girl, Betsy, to be her personal maid. All the other slaves

lived in their own family groups in a double row of cabins called the Quarters, at some distance from the house, but Betsy had her own room in the "Big House." She was very devoted to "Miss Mary" and "Mahse Ed," as indeed were all the slaves, for they were always treated kindly and with consideration.

Grandma and Grandpa had seven children; Richard, Sallie Edith (my mother), William, Maggie, Edward H., Jr., Mary and Frederick. My great-grandmother, Frances Wilson Harris, lived with them, as she had lost her sight and was widowed. Mamma used to tell how it was the duty of the children to lead her around by the hand and to watch over her. Grandpa was quite prosperous, though he had to work hard to support his large family, and to see to it that the slaves were more of an asset than a liability, which under poor management they could very easily have become. His was one of the few farms where it was possible to cut and put up ice in the winter time. They had an icehouse where the blocks were buried in sawdust and kept for summer use. It was a great treat in those days to have iced drinks in the summer. Across from their house was the little country church, and each Sunday a big bucket of ice-water was taken over with a silver-handled crystal dipper in it, from which the whole congregation drank, sanitation in those days being an unknown thing. Window and door screens were also unknown then, and in warm weather it was the duty of one of the little black boys or girls to wave a fresh-cut leafy branch or bough over the dining table while the family was eating, to keep the flies off the food.

Right after the close of the Civil War when Guerrilla bands of wandering or returning soldiers were active in the neighborhood the family suffered many losses, and many occasions of anxiety and even terror. More than one such marauding band stopped to demand dinner, sometimes specifying "a good chicken dinner," until the chickens were all gone, and the family left without even eggs. Often there were eight or ten of these rough desperate men at a time, and it was a sad drain on the available food supply. Once a band of them demanded money. Grandma told them, truthfully that she had none. But they pushed their way in, and ripped up carpets which in those days were tacked down, and even slit some of the feather-beds, letting feathers out all over the house, which depredations caused many hours of hard labor to

repair. Little Sallie was a very pretty child of about five or six, and had a small bank which she was filling with pennies and nickels. Finally one of the rough bearded marauders discovered it and snatched it from its place. Sallie began to cry, but with considerable spunk begged for her little bank. The man said she couldn't have it back unless she would give him a kiss. Sallie of course refused, putting her hands over her mouth and backing away. She was so pretty, and looked so woe-begone that another soldier took pity on her and forced the offender to restore the bank.

Everyone in the paths of these guerrilla bands hid as many of their valuables as was possible. Horses were of course impossible to hide, and were in great demand; and it wasn't long before most of them had been boldly driven away from Grandpa's farm and also from Grandma's father's farm over near Syracuse. Great-grandpa Ellis was an old man, but he and Great-grandma were still living at their old home place with one of their unmarried sons. One evening when Great-grandpa, a kindly silver-haired old gentleman, was riding his horse to the post-office to get the mail, he was cruelly and deliberately shot to death and the horse stolen from under him. And the murderers escaped!

The slaves had of course been freed. Grandpa, wanting to keep the farm going, hired as many of them as he could afford, to stay and work for him. He had suffered many losses from the raids of the guerrilla bands, and now the biggest loss of all--the slaves themselves. Although most of them wanted to stay on and work for "Mahse Ed", he couldn't hire them all, and as those who were leaving to find jobs elsewhere were taking their departure from the only home they had ever known, an amusing incident took place.

Little Isham, an ebony-hued lad of about ten, couldn't be found anywhere. His parents had hunted the place thoroughly--barns, sheds, fields, wood-lot, and of course the Quarters. They were getting quite perturbed, for the wagon that was to take them to town was waiting and the other slaves were becoming impatient at the delay. No one of course had searched the house, except perfunctorily the kitchen and cellar. By chance some

member of the family happened to go to the guest room for something. And there, sprawled comfortably on top of Grandma's beautiful white hand-knit counterpane lay young Isham fast asleep--dirty overalls, dusty bare feet and all. When berated (and cuffed) severely by his Mammy, he indignantly expostulated between sobs, "I'se free now--I kin do whatevah I wants to."

Life soon settled into a new pattern. Betsy now grown and married to Pete, another of Grandpa's slaves wouldn't leave whether she was paid or no, and neither would Pete. Betsy had become, under Grandma's expert teaching, an excellent cook, and now took over the management of the kitchen.

As the Harris children outgrew the country school, they were sent away to school--the boys to Kemper Military Academy at Booneville, a school still rated very high; and the older girls, Sallie and Maggie, to the Baptist Female Seminary at Lexington, Missouri. The Harrises were Methodists, not Baptists, but this was a very good school and not very far away. Mary, the youngest daughter, was never sent away to school. She was a timid nervous girl, having been born during the horrors of the war, and would have been very unhappy away from her mother. Cousin Lou was about the age of Sallie and Maggie, and was their boon companion, coming out to the farm from town for frequent visits. The three girls went away to school together, were roommates, and had wonderful times. There was a good music department in the school, and both Sallie and Lou specialized in piano and graduated in music. Grandpa was very proud of Sallie's ability, and made a trip to New York City to buy a Steinway piano for her. He also bought, as a graduating present, the diamond ring which she later gave to me when I graduated from Drury College, and which I gave to you, Margaret, when you graduated from the University of Nevada. After Sallie graduated she taught piano for a year or two before she married.

Soon after her marriage, Grandpa sold the farm and bought a large house on five acres of ground on the edge of Pilot Grove, about which I will tell more later. He went into the banking business, and owned the only bank in town. Uncle Ed and uncle Fred were both associated with him later in this business, which became quite prosperous. When Mamma used to take us children each summer to spend a month or so with Grandpa and Grandma, it was one of our chief delights to visit the bank, which we did nearly every day. Grandpa would give us each a small coin, usually a five or ten-cent piece, but sometimes even a quarter. I think we pictured him as the owner of all the money he handled, and which he could dispense right and left at will.

MY CHILDHOOD YEARS

As I have related, my first six years were spent in Lamar. I have very few memories of those years, except as they have been told to me, but I do remember that Aunt Betsy was an institution in our family. Mamma's sister Maggie was also married now to a young lawyer, Wm. F. Johnson, and they lived in Pilot Grove for a few years. When Mamma and Aunt Maggie were having their children, Grandma would send Aunt Betsy to act as nursemaid for first one and then the other. It so happened that my cousin, Mary Johnson, was born just three weeks before I was, so Betsy was helping Aunt Maggie, and Mamma had to be content with an ordinary "hired girl". But when, a year and a half later, my brother Harris was born he had a Negro Mammy, as did Madge three years later. And even though Betsy hadn't taken care of me as a tiny baby, she did later, along with Harris and Madge, and always called me her "little Lamby". Only one little incident seems to have stayed with me from my earliest years in Lamar. It was mamma's custom to drive in our one-seated buggy to the drugstore every day to bring Papa home to our noonday dinner. She usually let me go with her, but one day, in my pink sun-bonnet which Aunt Betsy was so careful to see that I wore to protect me from getting freckled, I was busy making mud pies

in the back yard, and as dirty as could be. So Mamma drove out of the barn lot without me. We lived on a corner, and just as she got under way along the side street I discovered the omission and ran screaming down the middle of the dusty street after her. Aunt Betsy came waddling to my aid as fast as her stoutness would permit, and flapping her apron vigorously called out, "Miss Sallie, Miss Sallie! Stop dat hawse and let my little lambie go along with you." So wiping the mud off my hands with her apron she hoisted me into the buggy, and went back to her kitchen muttering something about "goin' off and leavin' dat po' little Lamby". Aunt Betsy had lived all her life in the Ellis and Harris families and considered us all her "chillun"--Miss Sallie as much as us little ones.

After we moved to Springfield, Aunt Betsy no longer came to help Mamma, but remained as Grandma's cook in the big house in Pilot Grove, where we went for a long visit every summer. The house was spacious and high-ceilinged, and had a long wide hall running full length on each floor, and a long staircase with a broad smooth rail from top to bottom--a marvelous place for sliding, and kept well polished by this our favorite indoor sport. There was also a tower room in the old-fashioned cupola, where many fascinating old books and outmoded ornaments were stored away. We children loved to spend hours there on rainy days. One summer a woodpecker had been annoying the family with its pecking on the roof of this cupola. Uncle Fred, then a young fellow in his late twenties suggested one day to his namesake, my small brother Fred, that they go outside and "get him". So he took his shotgun and the two of them went outside to shoot the annoying bird. Much to little Fred's astonishment, and perhaps also to Uncle Fred's, the woodpecker was blown to bits. As Fred described it later, the air was full of feathers and small pieces of bird. Needless to say, Uncle Fred was very proud of his marksmanship, gained from his training at Kemper Military Academy. The big "front parlor" was also an entrancing place, though we were not allowed to frequent it too often. There was a long elaborate pier glass in one end, a beautiful Brussels carpet on the floor and many lovely figurines on marble-topped carved black-walnut tables, and of course long trailing "Brussels-net" curtains at the windows.

Aunt Betsy was a wonderful cook. One delicacy that she made, which I have never seen or eaten anywhere else, were her "beaten biscuits". I don't know how they were made, but they were an institution in Grandma's home. There was a heavy wooden block set up in its especial place, on which the dough was laid, and beaten with some sort of heavy mallet, this beating giving the biscuits a peculiar texture and lightness not obtained in any other way. No matter what other form of hot bread was served for dinner, however, there also had to be a pan of corn bread. Grandpa's dinner simply wasn't complete without it.

They had a big airy summer kitchen separated from the regular kitchen by a large square screened porch--screens being in use by this time. In summer we ate our meals on this porch. In winter the big indoor kitchen served both as kitchen and dining-room, except when there were guests. Then the dining-room was used--a big formal room most inconveniently located across and down the hall from the kitchen. In later years after Grandma was gone, this room was turned into a bed-sitting room for old great-Aunt Sallie, who lived to be ninety-five and spent the last ten years or so of her life with "Brothah Ed". (All Mamma's people had a most decided Southern accent. You children no doubt remember how Grandmother always called you "Jawge and Mahgaret".)

"Uncle Pete" was as invaluable in his way as Betsy was in hers. There was water to pump and bring in; wood to chop and wood-boxes to be kept filled; a big garden to tend; horses, cows, pigs and chickens to feed and care for down at the big barn. In fact the place was almost like a small farm. There was even a smoke-house with a dirt floor, and Uncle Pete's hams and bacon were kept smoking over corn cob fires built on the ground. Between the big back yard and the barn yard was a small fenced-in "well-lot" with a stile instead of a gate. The well that provided drinking water was in its center, topped by a pump, and from under the spout a long trough ran through the fence into a large trough in the barn yard where all the live-stock could come to drink. Large trees surrounded the well-lot and there was one in particular that we children loved to climb and from the flat

top-board of the fence swing ourselves down inside the well-lot by hanging onto the ends of its flexible spreading branches. There were "miles," or so it seemed to us, of flat-topped fences surrounding the whole place, and it was one of our chief delights to walk these fences. Our favorite place to play was over in the big wood-lot beyond the vegetable gardens in a grove of trees where we could pull each other around in the wood-cart. Another was a long arched grape arbor that ran across the big side yard back of the orchard to Uncle Ed and Aunt Alma Harris' cottage which was at the other end of that part of the tract facing on the front street. In front of the orchard and extending from Grandpa's house to Uncle Ed's was a wide strip of lawn. Occasionally this bluegrass was allowed to go to seed. Fred told me of one time when Uncle Ed gave him a big bag and an old comb and put him to combing the ripened seed into the bag. He didn't remember whether this job was really to collect the seed or to keep him from getting into mischief. Anyway Uncle Ed paid him a little money for the job. One part of the place that we kept strictly away from was the long row of beehives along the fence that bordered the side street.

Aunt Alma and Uncle Ed had no children of their own, but were very fond of their little nieces and nephews. Of course, Aunt Maggie's children, Newton, Mary and Marguerite Johnson, were there all the year 'round as they lived just a few blocks up the street, but as we were there such a short time each year, they seemed especially kind to us. We loved to play up at the Johnson's too, as they had a big playhouse in their back yard, and an enormous Newfoundland dog who would pull us around in the little cart which could be harnessed to him.

One summer when I was about ten we had a very exciting experience. Aunt Alma had gone shopping right after breakfast and Uncle Ed had gone to the bank. Suddenly some one in the yard noticed smoke pouring from the open kitchen door. The house was afire. There were no telephones, so while someone dashed the four or five blocks to town for the fire department, others began pumping water from the cistern just off the back porch, and still others removing valuables from the front of the

house. Soon the horse-drawn fire wagon arrived, also Uncle Ed and Aunt Alma. The cistern pump was removed, and the fire wagon placed in its stead, and soon the fire was out, but not before the kitchen was badly burned. Harris and Newt had crowded in as close to the fire as the fire-fighters would allow, but I had remained crouched on Grandpa's front porch, whimpering and shivering in excitement. I think that scene had so unnerved me that it was the main reason I have always been so afraid of fires. I adored Aunt Alma and was so distressed that her pretty home was (as I thought) burning up. My relief was very great when I found that most of the house was saved.



This fire was a misfortune, but a fire that happened about two years later was far more than a misfortune--it was indeed a tragedy. Uncle Fred, the youngest of Grandma's children and only thirteen years older than I, was away at Kemper Military Academy, but was expected home soon. Grandma had gone to his room one morning--it was Good Friday--to set it to rights, and decided to sort over a lot of old papers and letters which she found there, and to burn all that seemed of no value. She bundled them into her apron and carried them down stairs to the front bedroom which she and Grandpa occupied. It was a chilly day and a good fire was burning in the open-front Franklin stove there. She sat down in front of it and had nearly finished her task when a sudden strong draft sucked her apron into the fire. She jumped to her feet screaming, and though Aunt Mary ran to her aid and tried to beat out the flames, and though she might have thrown herself on the bed and smothered them out by rolling up in the covers, she lost her head completely, broke away from poor terrified Aunt Mary, and in a panic dashed back upstairs to the room from which she had just come, and stood screaming in pain and terror at the window. A neighbor across the street who happened to be in his garden, saw and heard her. He dashed over and up the stairs, and taking off his overcoat which luckily he had on, wrapped her in it and smothered the flames, but alas not before poor Grandma had inhaled them into her throat and lungs and was in terrible agony. The doctors did all they could to save her, but it soon became evident that she could not survive.

Telegrams were sent to absent children. Even though I was only twelve, I shall never forget how heart-broken, how distracted Mamma was. She was almost helpless, and Papa had to pack clothes for her and for little Fred, and get them on the train. The train trip from Springfield to Pilot Grove was only a little over a hundred miles but it was necessary to change cars and wait several hours at the little town of Clinton. When Mamma started to get off at Clinton she got up in a daze and was walking out of the train leaving her baggage and the sleeping four-year-old son behind. Fellow passengers had to bring her back and help her get her baby and her baggage. When they arrived on Saturday morning Grandma was still alive, and conscious at intervals, but death and a blessed release from awful agony came on Easter morning. Mamma idolized her mother--more so than anyone I have ever known--and it was long before she even began to get over her loss and the manner of her going.

Our visits at Pilot Grove were never quite the same after our dear Grandma was gone. Aunt Maggie had moved to Booneville, about twenty-five miles away and lived in a big house just across the street from the Kemper school. It was great fun for Madge and me as we were growing up to visit Mary and Marguerite there and meet the nice Kemper boys they knew. One summer Aunt Maggie took us on a week's trip to Chouteau Springs, a little countrified resort about half way between Booneville and Pilot Grove, where we rented a cabin and had a wonderful time. It was the first time I had ever been to such a place, and there was a swimming pool. People in all the nearby towns, were accustomed to drive (in buggies or wagons) to Chouteau for picnics, and to bring home jugs of the mineral water which was supposed to be very fine in a medicinal way. I had always been used to having this water at Grandpa's house, as he wouldn't be without it, but I didn't like the taste of it one bit!

GROWING UP IN SPRINGFIELD

Springfield, when we moved there in 1890 or 1891, was a large pretty town of about 25,000 people. There were two distinct business districts--Old Town and New Town--about a mile and a half apart. A public square was the real hub of the town. This was located at the center of Old Town or Springfield proper. Papa's new store was one block north of the square on Booneville Street. The High School was about half way between the two districts and Drury College campus was just a block east of the High School. Business houses were electrically lighted, but homes used gas-lights or even kerosene lamps. Most residences at that time did not have plumbing beyond that for cold water in kitchen sinks. We used portable bath tubs (or even wash tubs) for baths, and heated water on wood stoves--some stoves had reservoirs at the back--in summer on kerosene or gasoline stoves. An outdoor toilet was to be found in most back yards, and almost everyone kept cows, horses and chickens. Sanitation, I fear, was not much known or practiced in those days, and yet it seems to me we were about as healthy and free from epidemics as we are now.

There were many caves in the Ozark region where Springfield is located, and beautiful wooded picnic resorts. In fact the town was built in an area heavily wooded with many kinds of forest trees. These had to be cleared away to allow the building of houses, rather than to be planted for beautification. Just north of town was Doling Park--a big hilly wooded tract with many springs of cold pure water, and a small stream that issued from a long winding cave. A hollow place had been dammed up and allowed to fill, forming a large lovely lake with tree-lined banks of irregular pattern, where boating and swimming soon became popular. There were boat trips back into the cave with an experienced boatman who lighted the way with lanterns until some years later when electric lighting was installed. There was a street-car line running out to the park, but we usually went in our "surrey with the fringe on top."

There were no automobiles then, and transportation about the big widespread town was by horse-drawn vehicles, and by an intricate system of trolley cars. There was even one street-car line running out to the State Normal, two or three miles in the opposite direction from the High School and College, whose cars were drawn first by mules and later by horses. One could hop aboard without waiting for them to stop. It was abandoned by the time I was ten or twelve years old. A custom that didn't die out though until after I was grown, was that of having cows driven to pasture. There were pastures in all directions around the edge of town, and people rented pasturage for their cows. There were no dairies then. When Harris and Fred were little boys they had to drive our cow to pasture, but after awhile we hired a small boy. He would come along the alley each morning, letting a cow out of each barn lot to join the increasing number of his charges, and drive the whole herd to the nearest pasture, where they were enclosed for the day. Then at evening he would go get them and drive them home.

We always kept a "hired girl," as Mamma had always been used to having help in the kitchen, and they could be obtained for around two dollars a week, plus their room and board, when I was small. By the time I was grown this price had increased \$3.50. I believe that is the most we ever paid, but nowadays you can't get even a half day's work for that price. Mamma preferred a good colored girl naturally, but sometimes had to be content with a white one. These women did all the work too—washing, ironing, cooking and cleaning, with some help of course from members of the family. Papa or the boys usually did the milking, but sometimes the hired girl would do it. Once we had a girl who had become angered at something in the way of discipline, and one evening as she finished the milking she poured a little can of kerosene along the back of the barn and set it afire. Luckily neighbors back of us happened to see her, and gave the alarm. The fire was quickly put out and the girl dismissed.

Once in awhile even Mamma would have to take a turn at the milking when we were temporarily without help, and Papa and the boys were delayed in getting home for supper and the evening

chores. She didn't like this job and was a bit awkward at it, and also, I suspect a little afraid of the cow. This made her somewhat clumsy, and one such evening, the cow, in protest wouldn't stand still, but tried to back out of her stall, upsetting both Mamma and the milk pail, and stepping squarely with one foot in her lap, pinning her down. And there she stayed until one of us, hearing her calls, ran to her rescue, drove Bossy off and helped her up.

We lived most of our first eight years in Springfield out on St. Louis street, in a very friendly neighborhood. There were lots of children in the block, and we had such good times together. Our barn loft with its many bales of hay was a favorite play place. It had large windows and was light and airy, and the bales of hay made wonderful building material for houses and tunnels. One peaceful Sunday afternoon we were all sitting out on the front lawn except Fred, who was playing with some little neighbor boys in the barn loft. Suddenly loud childish screams rent the air. We rushed to the barn lot behind the barn, a rather rough and stony place, and found that Fred had fallen out of the hay loft window. His playmates explained that he had been doing some acrobatic stunt called the "little drop" and had fallen out of the window. We all agreed that it should have been called the "big drop". Fortunately no bones were broken and he wasn't seriously hurt. Another favorite place was in the two vacant lots across the street where the grass and clover (and weeds) grew tall in summer and afforded good hiding places (by lying down in them) when we played hide and seek at dusk.

One summer we had an awful storm. In fact it was the tail of what was called the St. Louis cyclone that had done terrific damage in the city of St. Louis. I remember standing in fear and trembling close beside Papa in the middle of the night at a front window and seeing two big locust trees at the front edge of our lawn blow down and fall toward the house, their fallen hilks entirely filling the yard. Although I was terribly frightened (and have ever since been afraid of strong winds) I enjoyed for the next few days playing all sorts of exciting games with the children among the leafy caverns and grottos, until the trees were chopped

up for firewood. Another favorite sport with us was sliding on a homemade trolley in a neighbor's yard. A smooth heavy wire was fastened up in a big tree, with a crossbar on a metal ring through which the wire passed. A long ladder was placed against the tree, up which we would climb, grasp the crossbar and swing off the ladder for a rapid and glorious descent. Then the one who was next would pull the crossbar back by means of a long attached cord. All went well till the boys wanted a faster ride and raised the wire higher up in the tree and got a longer ladder. When it was Madge's turn, she was just a few inches short of the bar, and in reaching for it, she missed and plunged to the ground landing upon her out-flung arms. Both arms were broken just above her wrists, and she had them in splints for a long time. Mamma asked the rest of us children to relieve her by taking turns feeding Madge. Even little Fred who was only about three or four, took his turn until one day while feeding her some grapes, she accidentally (I hope) bit his fingers. After that he couldn't be persuaded to officiate again.

Papa had a fruit farm about thirty miles away in the Ozarks. He would drive there in the buggy two or three times each summer--usually alone, as the road was rough and the trip slow and uncomfortable. Once he let me go with him when I was eleven or twelve, and that was one of the high lights in my childhood. We had to get up and start before daylight because he could spend only two or three days on the trip, and had much to see to. I was to spend a whole week, and be brought back in the big farm wagon by the tenant when he came to town with a load of produce. I shall never forget the thrill I experienced at starting off in the dark with the stars shining above us, though to children nowadays starting off on automobile trips, it would seem quite commonplace. When we arrived at the farm we drove in through a long lane of cherry trees, loaded with ripe cherries. That was another thrill, and after they were picked during the next few days, I thought it great fun to sit under a shady tree in the yard with the tenant's wife and daughters and help seed great tubs of them for canning--that is, it was fun until having eaten too many as I worked I became quite sick for an hour or so, and had to run out behind the woodshed several times. Be it said though, I had for once, all the cherries I could eat.

From this farm we had two or three barrels of big red apples stored away each fall in our cellar at home, and kegs of molasses and sacks of potatoes to last us through the winter. One year Papa shipped a whole carload of these Ben Davis apples to New York. And one summer the whole crop of Elberta peaches was brought, for some unusual reason which I have forgotten, to our house in Springfield to be crated for market. We children were quite excited to have long board tables set up in the back yard where the beautiful red and yellow fruit was sorted and carefully arranged in the crates. It was indeed a beautiful sight, for there were great heaps of the bright-hued peaches. We kept all we wanted to eat and to can, and part of the crated fruit was put upon the market for immediate sale, while the rest was placed in cold-storage for sale at higher prices when peaches would be "out of season".

Childhood days passed quickly and happily, and soon I was ready for High School. I usually walked the mile and a half to school, as I had to walk half the distance anyway, before reaching the street-car line. I was quite small for my age and preferred girls to boys as my chief companions. I always felt timid with most of the boys, and it wasn't until I was a senior that I had my first real date. I learned to dance and belonged to a little club of girls and boys who met around in the homes to dance. Dancing was not nearly the universal form of amusement then among young people that it is now. Nor was card-playing much in vogue. We had parties at which we arranged many clever games for amusement. We really had to exercise our wits and our ingenuity in those days, but I'm sure we had just as good times as students have now. There were of course no night clubs or staying out past midnight.

I liked all my High School work except my second year Latin. And it wasn't the Latin I disliked, but the crabby cross teacher--the only teacher I ever had whom I disliked. So rather than take two more years of anything under her, I arranged to substitute a year of chemistry, a year of physics and a year of German. And all of these I really enjoyed. In my three and a half years of living a mile and a half from school I was never

once tardy. But Papa had bought a lot at 717 Benton Avenue, just three blocks south of the high school, and built there during my senior year. And much to my disgust I found myself slipping in late one morning, hoping I would escape being detected as I tried to sneak quietly past the Principal's office. I still haven't forgotten how cheap I felt as I came face to face with him in the hall and encountered his peculiar frown--one eyebrow raised and the other drawn sharply down. We were all in awe of Prof Dodd, but as I look back on it now I think he was probably a pretty good scout.

I never enjoyed reading any lengthy passage in class, as I always seemed to get out of breath. So, toward the close of my senior year my consternation was great when I found that I had been accorded the honor of delivering the Salutatory address at the Commencement exercises. I am ashamed to confess it, but I simply couldn't face the thought of standing up on the platform and delivering a speech before that awful "sea of faces". So seeing my genuine distress my teachers excused me, and a classmate was chosen to fill the place.

One day while I was on the tennis courts just before school closed, Professor Dodd came out and asked me to come to his office. This time though, he looked so pleasant and cordial that I wasn't worried. To my great surprise he informed me that I had been awarded the one and only scholarship to Drury College offered to a graduating Senior. This honor I did not refuse, but began planning to enter college in the fall. If it had not been for this scholarship I doubt whether I should have gone to college, as we had never talked of it or planned for it. And Papa had spent quite heavily to build our house.

I shall pause right here and tell something of our first "own home" in Springfield. Our lot was large and well shaded with big trees. Behind the house was a deep fenced-in garden with fruit trees, berry bushes, and vegetables, and at the very back was the barn lot with its barn for the cow, the horse and the surrey. There was even a chicken coop. Our house was large--ten rooms with a big airy attic above the second floor.

We now had a furnace in the basement, whereas heretofore we had always had stoves, and now gas lights instead of kerosene lamps. But best of all we now had a real bathroom with modern plumbing and hot water. A broad staircase led up from a big square "reception hall," very much in vogue at that time, though more or less waste space. There was also a back stairway leading from the kitchen to the upper back hall just outside the "maid's room". And we now had a gas range in the kitchen instead of the gasoline stove, to supplement the still popular "cook-stove".

It was in 1904 that I finished High School--the year of the really splendid World's Fair in St. Louis. Aunt Clem, who had recently moved to one of the suburbs there, invited me to visit her and attend the Fair for two weeks as her guest, as a Commencement present to me. That was a wonderful experience for me. It was my first train trip all by myself, though Madge and I had occasionally gone to visit our aunts in Lamar and Joplin together (Aunt Cora Fink lived in Joplin). Imagine my trepidation on approaching the big city of St. Louis when I discovered that my train was not to stop at Old Orchard, Aunt Clem's suburb, but would carry me to one closer in. There I had to wait for a local train to take me back to Old Orchard. Aunt Clem and her daughter Blanche Fellows (she lived with Blanche, Bert and their little son Hugh) were also surprised when the train didn't stop, and had gone home thinking they had made a mistake and I would be on the next train. So when I finally got back to Old Orchard it was almost dark, and there was no one to meet me. I was a bit alarmed at first but made inquiries of the station agent, and set out on foot, there being no cabs in sight, and lugged my heavy suitcase the half mile to Aunt Clem's. Imagine their surprise and contrition to see me come "dragging" up the front walk, for I can tell you I was tired. The next two weeks though, more than made up for my reception. I had a simply glorious time. We would all go into town each day by trolley and spend the whole day "doing" the Fair. I have seen two World's Fairs since then, and even allowing for the exuberance of youth and the novelty of a first experience, they could not begin to compare with the St. Louis Fair--officially called the Louisiana Purchase Exposition.

Later on in the summer Papa sent us all (Mamma, Harris, Madge, Fred and me) to St. Louis for a week at the Fair, where we had rooms in a rooming house in the city. He wouldn't go himself as he said he couldn't leave the store, but he insisted on my going again. Dear Papa--always so kind and self-sacrificing--I'm afraid I didn't half appreciate him then.

COLLEGE DAYS

In September of 1904 came college days and the opening up of an entirely new world to me. Drury at that time was a Congregational school, one of the many small liberal-arts colleges established during the latter part of the nineteenth century throughout the middle west, by churches of various denominations, and largely supported by them. Drury had an intangible something not possessed by the state universities of today. The "Drury Spirit" was preached and lived by all the older students, and quickly caught by the Freshmen--a spirit of loyalty to an ideal--this ideal being that the goal of college life was to learn how to live a good life, rather than to learn how to make a living. But what fun and good times we had along with catching the Drury spirit and learning how to live.

I mentioned that I had been awarded a scholarship on graduating from high school, which paid my tuition and fees for the Freshman year. I found out very quickly however on making entrance application, that although I had been the one person in my class to win this award, I was nevertheless deficient in my entrance requirements due to having substituted physics, chemistry and first year German for the last two years of Latin. Another year of a language would fulfill the entrance requirements. I decided to take the equivalent of second-year German from a tutor during the summer when I found that a Drury graduate would be allowed to give me the work in thirty private lessons. The summer evenings were quite warm, and I would so hate to go inside and work under the bright (and hot) glare of

the gas Welsbach mantle in the library table lamp, that I would go out on the back porch, at the south west corner of the house, and study until it was almost too dark to see. That was a very bad thing, as I was straining my eyes, and at the age of eighteen had to begin wearing glasses, and have never been free of them since.

I entered Drury in September 1904 as a special student, intending to go only the one year, and took German with the Senior class, along with Freshman French, English and chemistry. At the end of the year I felt that I just couldn't bear not to go on and graduate, so persuaded the folks to let me continue. Then I found that doing just as I pleased as a Freshman was going to cause me fully as much trouble as my wilfulness in refusing third and fourth year Latin had done in high school. It took me the other three years of college to get straightened out so that I could finally win my A.B. degree. In the process I had to take four years of Greek.

That meant hard work and lots of it, but not all of college life was work. There was a big Drury picnic each fall which all the students, the faculty and their families attended, and we usually went by train in a special car to some lovely spot in the Ozarks. Those picnics were really memorable occasions. Our class picnics and parties were lots of fun too, even though we didn't have dances or card-playing. Percy's cave, one of the many caves around Springfield was our favorite picnic spot. The country around it was quite rugged and well wooded and made a fine place for hiking. There was a spring of good water and a big pavilion for spreading our lunches. but best of all a very beautiful cave with many long winding passages, huge chambers with exquisite stalactites and stalagmites, and an underground river. We had to have an experienced guide to go with us, as we might easily have become hopelessly lost. In early years we all carried good-sized candles fastened to sturdy sticks to light our way, but later on electric lights were installed. Percy's was eight miles from town and we usually hired wagonettes for transportation - big wagons with two long seats running the length of them, in which we sat facing each other, singing college songs and telling jokes and stories.

An exciting incident occurred there during a picnic of Madge's class, which I will tell here although it took place after I had finished college. A storm came up after they had started out. I was at home that day and Mamma and I were quite alarmed, for the wind blew a gale, the clouds were black, and the rain mingled with hail, beat leaves from the trees and plastered them against the window panes, and the thunder and lightning were terrific. Mamma was very uneasy about Madge, and she would have been frantic if she had known what was happening out at Percy's. The picnickers of course had taken refuge inside the pavilion, which was little more than a big roof over a floor where the long tables stood. But there came a lull in the rain, and Madge and her boy friend had volunteered to take buckets and dash down to the spring for fresh water. Just as they got there a terrific bolt of lightning struck a tree close by, and ran down into the ground. It stunned them both and knocked them flat. Their chaperon and some of the boys ran to their aid and revived them, but both were immediately very much nauseated, and their feet hurt so badly that they removed their shoes and stockings. Both had small brown spots burned on the soles of their feet. It was a very close call indeed.

It seems to me that students played more pranks in those days than they do now--but as a compensation there was less drinking and night life. I remember once on April Fool's day when we arrived at our Math recitation room we found that every one of the forty or fifty tablet-arm chairs had been carried to the third floor, and that "Rühlkerbonicus," a cow belonging jointly to the president and the German professor, Dr. Rühlkoetter, was tied to one of the supporting columns in the center of the otherwise empty room. Dear kindly Dr. Finkel took it all in his stride and merely bade his innocent-eyed boys to remedy the condition as quickly as possible. Dr. Shepard, our biology teacher, was very fussy and even old-maidish about his museum. Consequently it was the chief delight of a few of the more mischievous boys to take every opportunity to invade the usually locked precincts and play pranks on him. One morning we arrived for classes at Pearson's Hall, which was

at that time the main recitation building as well as the science hall, and found stuffed birds of all sizes and descriptions adorning the tops of window casings and doors, the teachers' desks and every other place where a bird could perch. Dr. Shepard's chief treasure was a complete human skeleton which the students had dubbed "Toby." Poor Dr. Shepard! Many were the unhappy days when Toby's bony frame was discovered in strange places. Once some very daring lads had managed to suspend him high against the really lofty steeple of Stone Chapel, where his bony legs and arms rattled back and forth in gruesome fashion. How they had accomplished such a daring and dangerous feat I never knew, but it took the city fire department with its long extension ladders to get him safely down. There was a little Negro church near the campus, and one Sunday morning as the superstitious Negroes arrived for worship, Toby was found hanging conspicuously from the little tower. That was really going too far. Something drastic must have been done by the College authorities, for as far as I can remember, that was Toby's last public appearance.

One college prank which most unexpectedly developed into rather catastrophic proportions took place in our Junior year. There was traditional rivalry between the Junior and Senior classes, and it was the custom for either class to try to "swipe" the other's refreshments at class parties. On this particular occasion, Dr. Kirby who was serving his second year as College president, was entertaining the Senior class at his home. It so happened that a group of the Kappa Alpha fraternity boys, Dad being one of them, was holding an informal meeting that same evening, when one of them thoughtlessly remarked what fun it would be to go steal the refreshments. The idea was enthusiastically received by a half dozen or so of them, and the nefarious project was successfully carried out. Dr. Kirby was a young man, hot-headed and impetuous, and when the theft was discovered an hour or so later, he "went up in the air" or as you young folks would say nowadays, "blew his top."

Now it so happened that one of our classmates, Wyatt Brandon, lived in the president's house, and took care of the furnace and did odd jobs for his room rent. Dr. Kirby immediately jumped to the conclusion that Wyatt had stolen the ice cream for our class. Denials went unbelieved, and Wyatt was suspended, and threatened with expulsion if a confession was not immediately forthcoming. Instead, a perhaps untactfully worded protest from the class was sent to Dr. Kirby. The college dean made an unsuccessful attempt to act as peacemaker, but the president called our class together and demanded an apology from each member of the class individually. We stood together as a unit against his unfairness to Wyatt and upholding our protest, refused to apologize.

I shall never forget the dramatic tenseness of that class-meeting, nor how horrified we were when Dr. Kirby suspended our whole class and ordered us to get right off the campus immediately. The girls and boys living in the dormitories went home with the ones of us who lived in town. Trying days followed, during which several meetings were held, both by ourselves as a class, and with the board of trustees. Our action was finally upheld by the board, and we were reinstated unconditionally. The next year we had a new president, for this was not Dr. Kirby's only unwise action. The knowledge of his hot-headedness was what had kept the guilty boys from confessing their deed. So determined was he to stamp out the refreshment-stealing tradition that a confession would have meant their expulsion from college.

Now to get down to the more serious aspects of college life. I was active in the college Y. W. C. A., and in the girls literary society, Lauriferae, while your Dad belonged to one called Delta Lambda Kappa, which was for both boys and girls. I also taught a Sunday School class in our church, the Cumberland Presbyterian, during my Senior year and up till my marriage, and had the same group of girls for several years. They were about ten or twelve years old when I first took them. We organized our class and called ourselves the Kappa Deltas--the letters standing for King's Daughters. We had small gold pins with the letters on

them, and the girls were very faithful and greatly interested. When Dad and I were married they gave us one of the small cut glass dishes which you have seen so many times at home. And some of them gave me individual presents, among them my first pair of silk stockings. Girls in those days wore instep-length dresses. Stockings didn't show, and maybe that is why silk ones were so long in coming into vogue.

When I was a Junior I was sent as a delegate to the Y.W.C.A. conference at St. Joseph, Missouri, along with a friend, Cornelia McBride. We went by train at night and shared a berth--my first experience at traveling in a Pullman. (From your experience at Asilomar, Margaret, you will know what an inspiration I got from this conference.) Cornelia was also a good friend in our Christian Endeavor Society. We joined different sororities, both being "locals" at first. Her's went into Pi Beta Phi and mine into Zeta Tau Alpha when Drury permitted national fraternities and sororities to come onto the campus in our Senior year. Madge was also a Zeta when she came to college. Dad's local became a chapter of Kappa Alpha. They had a house on the campus but the girls' groups had to be content at that time with rented sorority rooms in houses nearby. My best friend all through college, Ida Carter, was of course also a sorority sister. She married Will Knight, two years ahead of us in school. He later became a doctor and settled in St. Louis. (You may remember that we had supper with them and their four boys when we were visiting Uncle Charley and Aunt Elizabeth the year of the Chicago World's Fair in 1933. **1989029**)

Drury had two field-stations for field trips in biology and geology, both with adequate housing accommodations for the small classes we had in those days. One, Winoka Lodge, really belonged to Dr. Shepard, professor of biology and geology, and was about ten miles from town in a wild and beautiful spot on the James river. The other, Graydon Springs, was forty miles out in the wooded Ozark hills, an excellent place for collecting specimens for both botany and zoology, and for studying geological formations. It was here that Dad and I were assigned to the same project of studying Hannibal sandstone formations on a

geology field trip in our Senior year that we found more than just classmate's interest in each other. Dad however was a bashful lad and needed some excuse to begin coming to see me. It so happened that his fraternity brothers needed someone to design and draw the setting against which their photographs were to be mounted for the college year book, the "Sou' Wester." So Dad was quick to remind them that I had been art editor for the "Sou' Wester" the year before (it being the Junior class each year that edited it) and offered to ask me whether I would accept the task. So upon my rather eager acceptance he found it necessary to come over every few evenings for awhile until we got all the details straightened out. After that he found it easy to come spend an evening or take me some place quite frequently. So for some strange reason we both found our last semester of college life the most enjoyable of all. Commencement was approaching, and as so many other young people before us had discovered, our feelings were a mixture of sadness and of joy--sadness that this happy period in our lives was drawing to a close, and joy in the feeling of a worthwhile goal about to be won. Dad's degree was granted "magna cum laude" and mine "summa cum lauda." He was awarded the scientific honors and I was to be Salutatorian.

I had shied away from this honor in High School, but this time I gritted my teeth, metaphorically speaking, and determined that I would go through with it. I have forgotten the subject of my oration, but not the nervous tension which I hope I concealed, as on June 11, 1908 I delivered it in dear old Stone Chapel. Not only were my own family members there to hear me, but Dad's father and sister Clara had come to see him graduate, and although I didn't know then that they also were to be my family members some day, I had a faint suspicion that this might possibly become true.

Dad spent the summer at home in Kidder, Missouri working for farmers in the neighborhood, and we kept up a steady correspondence. He returned to Springfield in September, and not long after that on Sept. 28, 1908, the final word was said and we decided to build our lives henceforth for each other.

Before going on to tell of our post graduate days, there is one incident I must tell of here. I think it was when I was about half way through college that our family suffered a heavy loss by fire. Our drug store on Booneville street was getting very much out of date. The building in which it was located was old, and the store room itself incapable of modernization. There was no soda-fountain which by this period in history was an expected adjunct to any well appointed drug store. Now Papa found just at this time that by acting promptly he would be able to lease a larger and much better store room in the Baldwin Theater building over on St. Louis street. The lease on the old building lacked just a month of being up, but he decided to go ahead and lease the new place, buy a new stock of drugs and supplies, and install a really beautiful soda fountain with a huge mirror and fine onyx fittings and trim. There was a door into the lobby of the theater building, and soda-fountain trade was excellent. So, intending to close out his stock of goods in the old store as quickly as possible, he didn't transfer his fire insurance on it to the stock and fittings of the new store, as this policy would expire along with the lease in less than a month.

All was going well when in the middle of an unusually cold winter night with the mercury away below zero, we were awakened by the sound of the fire bells and saw an ominous red glare in the sky in the direction of the new store. Papa was laid up with a minor leg injury and couldn't dress and go to investigate, but by telephoning, our worst fears were confirmed. It was the Baldwin theater building. What a blow to us all, and to Papa especially, because there being no insurance on the expensive new outlay, it was now a total loss. The building was completely destroyed because the water froze right in the hoses and it was impossible to check the flames until they had burned themselves out. The firemen did manage to prevent their spread to adjoining buildings, but that was all. If it hadn't been for Papa's devoted brother Robert, I don't know just how he could have weathered the storm. Uncle Robert immediately came to the rescue with a substantial loan on very generous conditions, as soon as he heard of this calamity, and thus enabled us to get

on our feet again. For soon we were able to lease a similar store in the new Landers theater building, which was built immediately after the destruction of the old one. And business prospered in a modest way. It was in this second new store that I kept books after I graduated from Drury.

POST GRADUATE DAYS

Following our graduation in June 1908, Dad accepted an offer to teach chemistry in the Drury Academy, a preparatory school housed in two buildings on the campus. (This academy was discontinued a few years later when Drury dropped its church-supported affiliation for membership in the Rockefeller Foundation.) I had been offered a teaching position in the high school of a small town down in the Ozarks at forty dollars per month, but at Papa's insistence had refused it. He thought the salary too small to be worth the sacrifice of being "buried away off down there in the hills." Instead I accepted an offer from Drury to teach Physical Geography in the Academy, and to receive in return free tuition in post-graduate work in third year French and in Botany. At the same time I was able to secure quite a number of private pupils, tutoring them in various subjects--History, English and even High School Algebra. A former grade school teacher of mine was now working for her A.B. degree in the college, and the Drury authorities allowed me to tutor her through her entire college course in French. That was a novel experience for me, and one which I thoroughly enjoyed. I also taught a night class in French in the Y.W.C.A. The money I earned in these ways was quite a help in buying the materials for my trousseau, and I sewed and made myself many nice things on the sewing machine Papa had bought for me.

One day I received a very pleasant surprise. A huge box arrived from Aunt Virgie Crenshaw who had moved out to California several years before, where Uncle George had gone into real estate and made a fortune in the booming city of Los Angeles. (He was rated as a millionaire, and Crenshaw Boulevard of that city was named for him) This box was filled with

lovely things for my trousseau--a silk kimono, a nice afternoon dress, a silk petticoat, the first I'd ever owned, a handsome white "willow" plume, and best of all, yards of heavy white satin for my wedding gown and pearl encrusted lace with which to trim it. I shall never forget how thrilled and delighted I was upon opening this box.

Toward the end of Dad's first term as teacher of chemistry in the Academy, the chemistry teacher at Springfield High School was dismissed and on recommendation of his Drury professors, the position was offered to Dad. This meant a better income and was accepted. He finished out the year of chemistry for them and taught their physics classes during 1909-10. In the fall of 1910, he began graduate study at the University of Illinois where he had been given a scholarship in Chemistry. At the end of that school year he received his M.S. Degree in Chemistry, also an assistantship for the following year, which seemed to provide the means of reaching the Ph.D. degree as well as to bring our marriage closer. He would teach half time, and thus it would take three more years instead of only two to complete the required work. The assistantship was to pay him \$600 plus tuition and fees. So it didn't take us long to decide that we could both live on it, and that after a two and a half years' engagement we could now take the big step of getting married. Perhaps you who read this may consider us over-bold and over-optimistic to think we could manage on \$600 a year, but prices in those days were a far-cry from those of present years, as I shall describe later on. We were quite willing to endure privations in order to be together. Even long after those days of "Pinching pennies" were over, and we need not continue to deny ourselves many of the pleasures, and luxuries even, which I at least had enjoyed, we still maintained that young folks do not need to start out together on what their parents were able to give them before their marriage.

WE ARE MARRIED

Our wedding was set for Thursday, June 20, 1911 at eight in the evening. Dad arrived a few days before this date and stayed at our house. It was a simple but lovely home wedding, with a few relatives and a dozen or so of our best college-friends as guests. Madge in a pretty new dress, was my only attendant, and Dad's brother Harry who was on his way home to Kidder from Stanford University for a visit, was Dad's. Ida Carter played the wedding march, and dear Dr. Bacon, who had been my beloved pastor for many years, performed the ceremony. We were to stand in front of the fireplace which was banked with garden flowers, and at the first strains of the wedding march, we descended the staircase which had been entwined with garlands of greenery and wild daisies, which we young folks had gone out into the country that morning and picked by the hundreds. The beautiful white satin which Aunt Virgie had sent, had been made by a good dressmaker into a lovely wedding gown with a train. I wore white satin slippers (size 2-1/2 B, believe it or not) and white roses in my hair, but didn't have a veil. After the refreshments had been enjoyed and the guests had departed I changed into the pale-gray suit, blue-trimmed gray hat and gray suede shoes of my going-away outfit, and said good-bye to my dear family. Not until you, Margaret, many years later, were starting away on your honeymoon did I realize fully what Mamma's feelings must have been as she saw me, her first daughter go away with my young husband to make a new home. It is true that one of her children had already "flown the nest," as Harris had been married just two years before to a Springfield girl, Lettie Noblett. It is also true that I saw my own dear son married before my daughter left us for her new home. But you, George, had been gone from home for three long years, living first in a dormitory and later in a rented room, and it was happiness, unmingled with the feeling of loss, to see you about to acquire a real home again.

Well, after our somewhat tearful farewells we departed in a horse-drawn "cab" to take the train for Kansas City where we

were to spend a few days with Norman and Linnie, before going on in company with them to visit Dad's parents in Kidder for a month. What a happy jolly month that was. I grew to love my new relatives long before it was over. Jesse, Stella and little Robert, aged three, were there for a few weeks on their way home to Palo Alto, after a year's post-graduate work for Jesse at Columbia University in New York City. Norman and Linnie, with their four-year-old Charles, and two-year-old Louise had accompanied us to Kidder. Harry also was there. Bertha and Will Stephens and six-year-old Harold lived on a farm nearby, and Clara and Dean were still living at home though Dean was out working for a farmer. One weekend Charley, the eldest, who lived in Springfield and worked for the Frisco Railroad Co., came home. So the whole family was home, eighteen in all. What a crowd for which to provide food and beds! For a few nights Clara slept at a neighbor's, and Harry in the back yard on an old couch. He preferred to sleep out of doors anyway, as the heat of an unusually hot Missouri summer seemed almost unendurable to him in contrast to the chilly nights of California. Of evenings we would all sit out in the grassy side-yard telling jokes and stories, and just talking. I thought it a very fine, very happy family and was glad I now belonged to it.

At the end of the month we went to make Grandpa Harris a visit in Pilot Grove. I wanted Grandpa, Aunt Mary, Great-aunt Sallie and Uncle Ed and Aunt Alma, all to see my husband. We had a very pleasant time there. Aunt Sallie told us stories of her young days, and of the Civil War times. One of the most touching incidents was to have old Aunt Betsy, our black Mammy, come hobbling over to make us a little visit, and to see her "little Lamby" now grown up and married. How pleased she was when Dad gave her a handful of small coins which she called her "chicken feed."

PART II

OUR OWN HOME AND FAMILY LIFE

ITS BEGINNING AT ILLINOIS

Following our visit in Pilot Grove, we went back to Springfield for a month before going on to our new home in Urbana. Soon the time came to pack the rest of my clothes and all our nice wedding gifts, and go to Illinois where Dad was to plunge into the remaining years of work for his doctorate. During the year he had already spent there, he had become acquainted with the Gordon family--George and Jennie Gordon, their small daughter Frances, and Jennie's mother who soon became Grandma Ehrman to us. They were one of the friendliest and most hospitable families I have ever known, and had invited Dad to bring me to their house to stay until we were able to find a suitable home for ourselves. Of course we paid rent for our room, but they made us feel so much at home that it became our almost unvarying custom during the rest of our stay in Urbana to spend Sunday afternoons with them when we weren't otherwise engaged. They moved to Appomattox, Virginia soon after we left Illinois, and they were the ones we traveled across the whole state of Virginia to visit in June 1947 when we had come east to visit you, Margaret, at Quantico. George and Betty had come over from Wilmington to join us on a trip to Williamsburg. We were using both cars, and you let us take yours over to Appomattox while George and Betty took your family home to Quantico in theirs.

Among our best friends in the University were Dr. and Mrs. Herbert Creek of the English department. They lived two doors from the little apartment that we soon found for our first home quite near the campus. We all belonged to the same church--

the big student Methodist church, of which Dr. Jas. C. Baker was the pastor. (He later was made Bishop and was sent to the California-Nevada area where we later renewed our acquaintance with him.) Dad was already a Methodist, so we both joined that church, partly because we lived just around the corner from it, and the Presbyterian church was over a mile away, and partly because we didn't have a car.

Our first home was very modest, being one-third of a remodelled private home. Our kitchen had been a bedroom, and had a tiny sink with only a cold water faucet installed in it. A gas range also had been placed in a bay window. There was, however no back door. We shared the bathroom with the other downstairs tenants, and heated our three rooms with a single coal stove. But how happy we were just to be together after our long engagement. The apartment was partly furnished and our rent was only \$13.50 per month. For five cents I could get a loaf of bread, or a pint of milk, or enough round steak to serve the two of us adequately. Now you see how it was possible for us to get along on \$600 a year. And soon we had the good news that Dad was to be given the position of teaching in the summer school for an additional \$100. This extra \$100, we soon found would be quite a boon, as prices were beginning to rise a bit already. I remember my feeling of dismay when suddenly the price of meat went up, and my butcher told me my five cent piece of round steak (or its equivalent) would now cost me a dime. The following year we moved into a better apartment, half of a duplex, for which we paid only fifteen dollars monthly. It was unfurnished though and we had to buy more furniture.

PAPA'S LAST ILLNESS AND DEATH

Before going on with our life at the University of Illinois, I must tell of our first great loss. For several years Papa had not been very well and this was a subconscious, though constant worry to us all. During the summer of 1912, he became much worse and was forced to take a vacation from the store. At Uncle Robert's

and Aunt Cora's cordial insistence, he went to visit them in Boulder, Colorado, where they had moved from Joplin, Missouri, a few years before. We all hoped the change of climate, and getting away from the long hours necessary in a drug store would help him. None of us realized that the "sore spot in my stomach" which he sometimes mentioned but of which he seldom complained, was an incipient cancer. However after he had been in Boulder for a few weeks his condition became so serious that he consented to go to a hospital for an examination. An operation was deemed necessary, and was performed in September. It was then discovered that not only did he have cancer of the stomach, but that it had spread to the liver and gall bladder. All that could be done was to drain the area and keep him as comfortable as possible.

I shall never forget the blow it was to receive Aunt Cora's kindly worded letter breaking to me the sad news. It did though break somewhat the shock of the telegram which came on October tenth, telling of his passing. Mamma had been summoned but did not arrive in time to see him before he was gone. The funeral was held in Aunt Maude Fink Staats' home in Lamar, and interment was in the old family plot in the cemetery nearby where Grandpa and Grandma Fink were already buried. Dad and I went to Springfield and accompanied the family to Lamar. After the funeral we all returned that evening to Springfield, and Dad went back to his duties at the University as quickly as possible, leaving me to spend a week with Mamma and the others trying to become accustomed to our great loss. Now, more than ever, we came to realize what a good man he had been, how kind, patient and self-sacrificing not only to his own family but to everyone he knew.

More mundane affairs also claimed our attention, for it must be decided what to do with the drug store. Papa had a clerk who had worked for him for many years, and whom he had always trusted. It was decided that he and Harris, who had also worked in the store since he and Letty had been married in 1900, would continue to operate it, at least for the present, as they had been doing during Papa's stay in Colorado. We soon, however, found that the trusted clerk was not as trustworthy as

we had thought, so in about a year the store was sold.

LIFE AT ILLINOIS

Dad was working very hard at the University with his teaching program, and on his research problem involving the chemistry of tantalum and columbium. But he thoroughly enjoyed both the teaching and the research. One afternoon--it was the seventeenth of April, 1913--as I came home from a church meeting, our neighbor in the other side of the duplex, came hurrying down the walk to meet me, and began very abruptly, "Now Mrs. Sears, you mustn't be frightened--," I didn't wait to hear the end of her sentence, but was on the front porch opening our door before she could finish. There on the couch was Dad, trying to come to a sitting position before I could catch sight of him, his head one complete mass of bandages, almost like a big white turban, but coming down to the tip of his nose and covering his cheeks. It was a good thing that our neighbor had been able to give me a hint of a warning, or I fear I might have almost passed out from shock, for he wouldn't yet have begun to try to sit up--and he did look like a real hospital case.

The story of the accident was soon told. He had been trying to recover by distillation some sulphur monochloride from a mixture of that and tantalum chloride when a violent explosion occurred. The mixture was acid and about twice as hot as boiling water, and he received it full in the eyes and upper part of the face. He had performed the same experiment that morning wearing goggles, but deemed them unnecessary when repeating it in the afternoon. The fact that very little of the superheated acid material touched the eyeballs themselves, shows how fast the eyes can close. But enough did penetrate to cause him intense pain and shock, and he groped his way very quickly to the sink and doused his eyes with water. Other students came running to his aid, and led him across the street to the office of a good doctor where he was quickly treated and

bandaged, Dr. Stanley happening by a stroke of rare good fortune to be in. Nowadays a doctor would have taken him immediately to a hospital with so serious an injury, but hospital care was neither so good nor so available then, and the doctor allowed me to take care of him at home.

For two weeks I led my blindfolded husband twice a day to the office for treatment, the doctor showing me just what to do, and how to do it at the first visit. It turned out to be almost a full-time job, for the bandages had to be removed every hour during the day, fresh argyrol and vaseline applied copiously and fresh bandages put on in just the right manner. The reason for the frequency of changing the dressings and for the copious quantities of vaseline was to make sure that there would be no slightest chance for "proud-flesh" caused by the burns to adhere to the eyeballs and impede their free movement. Everything had to be sterilized--even my hands. There was little time left for cooking and housework.

A much overdrawn account of the accident, in the student newspaper, was copied and still further exaggerated by the Associated Press, and was read by Norman in Kansas City and by Father Sears in Kidder. It stated that he had been probably "fatally injured" and would be sent to his "home in Kidder, Mo." So before I, not knowing this, had had time to write any letters breaking the news to the family, we began getting telegrams of inquiry. By then we had had our fears of possible blindness allayed, and I could reassure them, but Charley, working for the railroad, took the first train and came to see for himself.

Two little incidents will give you a faint idea of how rigidly I had to keep my feelings under control as I dressed his eyes some fourteen or fifteen times a day. Charley started to watch me perform my task a few minutes after his arrival, when suddenly he dashed from the room, blurting all in one breath, "Edith, where's the bathroom?" A few days later Mamma came from Springfield to help me with the cooking and housework for a few weeks. I had managed to prepare a nice dinner for her, but when she had her first look at my poor Dear's face and eyes,

it made her so sick that she went right to bed without touching the dinner. I will have to admit that I too, by reason of the strenuous nature of my job as nurse, I was becoming very jittery and nervous. I did a good deal of spilling and slopping as I tried to cook, and I broke a few dishes. But those things were mere trivialities, for we were devoutly thankful that Dad had not lost his sight, but would recover soon and be able to go on with his research, and the intensive reading program that would be necessary to enable him to come up for the examinations for the Ph.D. degree. For some months I had to read his books to him, for the injuries had left his eyes temporarily weakened. And during all the forty years that have elapsed since then, as you children well know, I had to hunt with my special forceps for the tiny sharp eyelashes that constantly came in toward the eyeball of his left eye, (causing much pain and irritation,) and extract them, for the hairline was burned out of its natural contour.

That summer we made a trip back to visit all our people in Missouri, and while at Norman's in Kansas City, we consulted an eye specialist, and have since consulted others. No one had ever been able to undertake anything that gave real promise of remedying the situation until in 1955, a very good eye specialist (our next door neighbor, by the way) became interested in our problem and consented to try to eliminate the wild eyelashes with the electric needle, hair by hair, as they grew out. He kept his equipment at our house most of the time and would come over after office hours when we called him. It took about a year and a half, but his patient effort was successful, and now Dad is free of this painful annoyance. We shall never cease to be thankful for his patience and kindness.

Charley and Elizabeth came to make us a visit the summer before we made the trip to Missouri, and the following winter Madge came to visit us for the first time, having graduated from Drury the previous June (1913). It was about this time that Dad received the honor of being elected to Sigma Xi, the national scientific honor society. He had been elected to Phi Lambda Upsilon, national chemical honor society a year or so before.

After Dad's recovery from the explosion, things went well for awhile. But toward the end of the long hard grind of study, and under the strain of preparing for the examinations he developed a case of what the doctor called nervous indigestion, but which we learned many years later was probably a peptic ulcer. A very careful diet, in which all bakery bread was eliminated, soon remedied his trouble, and he soon seemed as well as ever. That was when I bought my bread-mixer and learned to make good home-made bread.

Soon June had rolled around again, examinations were successfully over, the thesis was completed and the degree was soon to be awarded. We had to buy the necessary cap and gown, but I felt I could make the hood with its satin lining of orange and blue (the Illinois colors). So I borrowed Dr. Creek's hood, measured it carefully, and bought the materials. It was a bit difficult to cut out the pieces accurately without a pattern, but when it was done no one could have told that it hadn't been ready-made as were the cap and gown. We had saved about fifteen dollars. How proud I was to see the degree finally awarded--the degree for which we both had worked so long. And how relieved we were to have the long struggle ended, and the goal attained with honor. Dad had already accepted the University's offer of an instructorship at a salary of \$1,200 for the coming year. We now felt we were really ready to live. We moved out of the duplex into a single-family house on High Street, where we wouldn't have to share the bathroom with four or five other people, as we had done in the duplex, which in reality was an old home made to accommodate two families. Now we could do as we liked with the yard outside also, and we soon had a very fine little garden. Our rent was to be \$20 per month, which was not too great an increase.

Another reason for being glad to be to ourselves was that our first baby was now on the way. That summer of 1914, Mamma and Madge came to make us a visit. Madge got a secretarial job intending to stay in Urbana and work. But Uncle Robert and Aunt Cora wanted her to come out to Colorado and make them a visit, and sent her the train fare. Mamma had rented our old home,

keeping just one room for herself and Madge. Fred, now about twenty, had heard of a good job in Memphis and, the old home being now broken up, had gone down there to work. A little later he went on down to Birmingham to work for awhile. Harris and Letty with their two children, Virginia and Richard, had moved to Chicago after the drug store was sold. So Mamma was all alone in Springfield, and it seemed very desolate to her to have just a room in her old home. That fall they leased the home for a year, and both came back to Urbana to stay with us. Madge obtained a position in the registrar's office at the University, and Mamma helped me with the housework. I was so glad to have her with me, especially now that the baby was expected soon.

Fred left Birmingham about this time and came up to Urbana. We had only two bedrooms in our house, so we fixed up a sort of daybed at the end of the dining room for him. He didn't need to use it very long though, as he found work in a student restaurant near the campus, and was given a room there. This work was not to his taste, however, and after a few months he went to Chicago, where he worked for a year or so for the Bell Telephone Co. and then for another year for the Hubblethwaite Funeral Directors.

It was during this summer of 1914 that the First World War broke out. To me, on first hearing this appalling news, it was simply unthinkable that such an awful calamity could happen in civilized Christian nations. Of course it was as yet far from our own country. And my mind was full of our own coming happiness and the necessary preparations for it. There was no really adequate hospital in either Urbana or its twin city, Champaign, so I was to have the baby at home. When I engaged my nurse about two months ahead of time, she instructed me as to just how to make and sterilize all the dressings that would be needed. These were all made and put carefully away. By this time the end of the year was approaching when the four of us, Mamma, Madge, Dad and I, would enjoy our Christmas together. It was then that we started acquiring our Haviland china set, the "White Ransome" pattern, by giving a few pieces of it at a time to each other.

At about eleven o'clock on the evening of Jan. 30th, a cold rainy night, we called the nurse and Dr. Stanley. We have often laughed about it since then, but before they arrived I had to get up out of bed between pains and fish for Dad's wild eyelashes (and several times after the baby was born, and upon various other occasions when I have been temporarily confined to bed, I have had to have him lie down beside me so I could get up on one elbow and extract them). At four o'clock Sunday morning, Jan. 31, 1915, our little son was born, and he weighed almost nine pounds, a healthy blue-eyed baby with red-gold hair. We named him Howard William, not for anyone in particular, but just because we like the name. Again life took on new meaning and we had to learn to make the adjustments, even as all new parents have had to do since the world began. And how we did enjoy our little son. We had waited nearly four years for him. It was nice to have Mamma and Madge in the house with us, as they gave me so much help, especially when the nurse had gone after her two-weeks stay. After a few months though, they left us to rent a nice apartment a few blocks away, as Madge had a good position and they planned to remain in Urbana.

I think I should digress here and tell of the fate of our old home in Springfield. I mentioned that Mamma had leased it for a year when she and Madge came to Urbana in the fall before Howard was born. It seems that the tenants broke their lease and moved out, even leaving the back door open. A neighbor wrote us about it. So Mamma had him store part of the furniture, and send her what she and Madge would need to furnish the rather large apartment they had just rented. Soon after this we had the bad news that the mortgage on it, which had never been paid off, had been foreclosed, and the house was lost. They had kept up the payments but did not know, due to a failure on their lawyer's part to notify them that the mortgage was overdue.

To get back to our little son. He continued to grow and thrive, and after a month or two of getting used to his brand new digestive apparatus, was very easy to take care of. When he was about six months old, we all three went back to Missouri on a visit to Grandpa and Grandma Sears in Kidder, and to Uncle

Norman and Aunt Linnie in Kansas City. Howard's good nature and happy disposition were the subject of much comment by Grandma, and apparently she wrote of it to Aunt Clara, then teaching school in Petaluma, California, for soon Clara began designating him "the perfect child," and when she came to visit us the following summer (1916) she found no cause to revoke the name. When he was about a year old, we found to our dismay, that he had adenoids which would have to come out. Dr. Stanley, a good surgeon as well as all-around physician, removed them in his office, and Howard made a quick recovery.

A month or so after this, Cousin Caddie came to visit us for three weeks in March 1916. She was Clara Scoville, Grandma Sears' first cousin, and was on her way home to Buffalo, New York, from a visit with Grandma and Grandpa Sears in Missouri. She and Grandma Sears had been childhood playmates and chums in Buffalo and had kept in touch with each other all through the years. She had always been interested in Grandma's children and had always remembered them with Christmas gifts. It was she who sent Dad, when he was a little boy, the treasured old scrap-book we have had for so many years. She had made the book itself while working in a book-bindery and had collected and pasted in it the quaint old pictures you may remember having seen in it. This was her first and only trip to Missouri, so Dad had never seen her before although he had often spoken of her.

Soon after her visit with us was over, we received the bad news that my brother Harris was very ill with pneumonia in Chicago where he and Letty with their two children, Virginia and Richard, had moved after the drug store in Springfield was sold. Mamma and Madge went immediately. He was in the hospital and was delirious. They couldn't tell whether he really knew them or not, though he talked to them a little, and he died in less than an hour after their arrival. Fred, who was now working for the Bell Telephone Co. just out of Chicago, at Hammond, Indiana, always went into Chicago every week-end to see Harris, and didn't know that he had died until he arrived that very day. Harris was buried in a Chicago cemetery, and after the funeral Mamma and Madge returned immediately to Urbana. It was very hard on Mamma to

give him up--the first one of her children to go. Things had been hard for her after Papa's death and hardships had come into her life, which as long as Papa had been with her, had been so sheltered and protected.

That fall of 1916, Grandpa and Grandma Sears came to spend the winter with us. They had been visiting Norman and Linnie in Kansas City, and Grandpa had not been feeling very well, so Norman wrote us, urging us to have our doctor give him a complete examination. So Dad took him to Dr. Stanley. He discovered Grandpa's arterio-sclerosis, and urged that he be put right to bed for complete rest. Grandpa was much upset by this, and so was Grandma, for she wrote Norman and suggested that he come and give his advice. They had grown accustomed to depend on him, as he was the one who lived closest to them since the children had all grown up and left Kidder. So Norman came to visit the folks for a few days, and decided, wisely perhaps, that as long as his father was fretting so at being kept in bed, he would be better off if he got up and tried to take life as calmly and easily as he possibly could. So Grandpa did get up, and thereafter enjoyed his stay with us very much, and it didn't seem to do him any harm. The condition did grow progressively worse, as arterio-sclerosis in the old always does, but no faster than should have been expected.

It was during this winter that the eight children worked up the idea of writing their family history and presenting it to their parents as a tribute on their forty-fifth wedding anniversary, Dec. 19th. Elizabeth, Charley's wife, who had accompanied them from Kansas City to Urbana, and stayed to visit us awhile, helped gather data about the family history--not a little of which she obtained by writing to Cousin Caddie.

Also during this year we had Howard baptized. I might say here that he was the only one of our children to receive baptism by a minister, Dr. Jas. C. Baker, who later became a bishop. Dr. Baker was also the founder of the Wesley Foundation movement. That Christmas, with Grandpa and Grandma in our home,

and Mamma and Madge coming for the day, was the first one we celebrated around a Christmas tree. When Dad and I were children we merely hung up our stockings. In our family each stocking was hung to a dining-room chair, and the chair was used to place such gifts upon as would not go into the stockings. But ever since this time we have had our Christmas tree each year, until 1943, the first one that Dad and I had to spend alone.

As spring began to draw near, Grandpa and Grandma commenced thinking of going home. Life would be easier for them in warm weather in their own home which had no modern conveniences, and we would not need to worry about their having to endure the hardships of winter at their age. Grandpa was now eighty-one and Grandma seventy-one. I remember that just before they were to leave us in April they were a bit disturbed by a letter from Dean, their youngest, who had been living out in California for a year or two, saying that he was soon to be married to Ethelyn Vaughan. Dean was not quite twenty-two, and to them he was still too young to marry and start his own home. But they wisely reconciled themselves to the marriage, and never had cause to be sorry, for Ethelyn made him a very fine wife, and theirs has been an unusually happy home.

WE MOVE TO NEVADA

That summer of 1917 saw three big changes. Little did we think that before autumn should come, both Grandpa and Grandma Sears and we would pull up our roots and transplant them in the far West, nor that Mamma and Madge too would leave Urbana. In June, Harry and Huldah came from Berkeley, where Harry was City Chemist, to visit the folks in Kidder, and prevailed upon them to sell their home in Kidder and accompany them back to California to make their home in the milder climate of Berkeley. Here they bought a cottage quite close to Harry's. Clara was teaching school in Petaluma not many miles from Berkeley, and could come and visit them often for week-ends. Jess and family had long been settled in Palo Alto, and Dean further south in Delano. So everyone was well satisfied with the move.

Now as to our move. Dad was teaching in summer school that summer of 1917, during June and July, and we had made plans with Herbert and Leone Creek to take a vacation together in Colorado during the month of August. We had written out to a rental agency and engaged a little cabin high up in the Rockies in a summer resort area called Buffalo Creek Park about thirty miles from Denver. We didn't start out together with the Creeks, as they wanted to visit relatives on the way, and so did we. Well, just as we were beginning to pack for the trip, a telegram came from Harry, telling us that there was a vacancy on the chemistry staff at the University of Nevada, and that he had recommended Dad for the position, and for Dad to get in touch with the University if he was interested. Harry had been offered the position, but having recently accepted one as Berkeley City Chemist, didn't want to make a change just then, but thought there was a possibility that brother Dick might be interested. At first we didn't know what to do, but as the Creeks had already gone and we couldn't reach them, we decided to go ahead with our vacation plans after wiring Dr. Adams, Head of Nevada's chemistry department, making inquiries, and directing him to wire us at Boulder, Colorado, where we were to make Aunt Cora and Uncle Robert Fink a visit.

So we started out via Chicago, Madge accompanying us that far, where she was to visit her college chum, Jean Laubenheim. (Jean was soon to marry the son of Dr. Shepard, our Drury geology professor.) We left her there, and after a brief stop in the city, went on to Kidder, Missouri, where we stopped for a short visit with Aunt Bertha and Uncle Will Stephens and their little sons, Harold and Leland, who were now living on the old home farm where all the Sears children had been born. Howard was now two and a half years old, just a few months older than Leland. The two little boys had much fun playing together, with Harold who was about twelve, to look after them. They all rode Nellie, the spotted pony, and Howard had his first experience seeing and feeding chickens. He was quite thrilled to pick the grains from the ears of corn and scatter them among the hens which came crowding around his feet.

Next we stopped off just between trains with Uncle Norman's family in Kansas City. Then we went on to Denver where Uncle Robert met us in his car and took us to his home in Boulder. There we had a reply telegram from Dr. Adams which made the offer and named a salary of \$1,500 a year. This was \$300 more than Dad was getting at Illinois, and seemed to offer a better outlook, so he wired accepting the position. He left me and Howard to finish our visit with Uncle Robert and Aunt Cora, meet the Creeks in Denver and accompany them to the mountain resort, while he took the train back to Urbana to pack up all our possessions and ship them to Reno, where the University was located. I think Mamma was somewhat dismayed at this turn of events and at having us move so far away with her beloved little grandson. But she had Madge with her, and Fred, working in and near Chicago, not too far away.

Dad got one of his young associates in the Illinois chemistry department to help him crate our furniture, and Mamma and Madge helped him with the sorting, packing and discarding of clothing and small articles. Doubtless some things that I probably treasured were ruthlessly left behind, but one thing that was carefully packed and brought along was my toaster--our only electric appliance except my iron. I mention it because I had been talked into buying it by a persuasive salesman for the extravagant sum (so it seemed to me at that time) of \$6.50. And immediately I had felt I was unwise, and feared Dad would disapprove, and was much relieved when I found that he didn't. And that is the self-same flat-top toaster with its additional grid for pancakes that we are still using in 1960, though other toasters have come and gone. So it proved to be a very good "buy" indeed.

Before going on with our move to Nevada, via Boulder and the vacation trip with the Creeks, I must tell about Mamma's move from Urbana. Now that we were definitely leaving Illinois, there was no particular reason for her and Madge to stay on there in a town that meant nothing especially to them. Our home in Springfield was gone, so they decided to go to Pilot Grove, Missouri, and make Grandpa Harris a visit. Madge felt that she must get a job, and soon went to Kansas City to visit Cousin Blanche Fellows

(Aunt Clem's daughter) and look around for work. In some way or other she decided to try her hand at selling books. When Grandpa heard of this, he wrote her to come right back to Pilot Grove. He wasn't going "to have a granddaughter of his peddling books from door to door." So after talking things over with her, he sent her back to Kansas City to take a business college course, after which she took a position as Cousin Bert Fellows' secretary. But Bert and Blanche moved away from Kansas City soon after this, and in 1919, Madge worked for the Kansas City Trust Co. for awhile. We were well established in Reno by then, and persuaded her and Mamma to come out here. So Mamma left her father's home in Pilot Grove, met Madge in Kansas City, and the two of them came to Reno in August, 1920. They lived with us for awhile and later rented the Chrisman house on Evans Ave. But I will tell more of this later in its proper chronological place. Now I must get back to our stay in Boulder.

No sooner had Dad left us there than Howard had a little sick spell with nausea and temperature. It turned out, as we found out later, to have been caused by his cutting two bicuspids at the same time. But we didn't know that then, and Aunt Cora worried about my taking him off to the resort up in Platt Canyon. I had no way of getting in touch with the Creeks, and as Howard was now apparently all well again, I decided to go back to Denver and meet them as we had agreed. The folks took us there on the appointed day, and we found the big Denver station just swarming with Boy Scouts of all ages, assembling to entrain for a big convention somewhere. I hunted frantically for the Creeks, but couldn't find them. I felt sure however that they would be on the train, and much to Aunt Cora's distress, said good-bye and got aboard with my little boy. It was past his nap-time, and I found a double seat empty, and let him go to sleep with his head on my lap. I kept thinking that Herbert Creek would come through and look us up, but he didn't. It was getting toward evening, and I was becoming more and more uneasy, and had to fight down a feeling of panic when I thought of

the seemingly growing possibility of our having to spend the night alone, away off in the wilds somewhere. And what if there should even be bears outside our door in the night!

Finally we arrived at the tiny station of Buffalo Creek Park and left the train. My relief at spying Herbert and LeOne away down the platform was so great that it caused a revulsion of feeling, and I determined to administer a mild punishment. They knew nothing of our move to Reno, so when LeOne came rushing up to me and said, "Where is George? Why didn't he come through the train to find us? Ronald was asleep and we kept waiting for him to look us up." I replied in a lugubrious tone, "He has gone back to Urbana, and I am on my way to Reno." LeOne's jaw dropped and she stared at me as if she couldn't believe her ears. She began stammering incoherent questions, and when I solemnly repeated my statement she began to cry. I thought the punishment had gone far enough, so explained immediately, and told her how frightened I had been for the past hour or so. They were both filled with contrition and regret that even though having been able to find only one double seat, and having let little Ronald lie across both their laps, Herbert hadn't put the care of him wholly on LeOne and come to find me.

Well we had a wonderful time together in the beautiful spots near our cabin, and enjoyed the cool mountain air so different from the heat of an Illinois summer. Dad returned for us in about ten days, and we didn't wait to finish our two weeks there, but parted from our dear friends on the little station platform with much sadness, for we had been close friends for six years. We didn't see them again until 1933, when we visited them on our way to the Century of Progress World's Fair in Chicago. However, LeOne and I wrote to each other frequently, and have continued to do so all these years until her death in 1958.

Dad, little Howard and I resumed our journey toward Reno, stopping off briefly in Colorado Springs, seeing Royal Gorge from an open observation car, and stopping over in

Salt Lake City long enough to visit the Mormon Temple Square. We arrived in Reno on the morning of August 31, 1917, and immediately began to hunt for an apartment. By nightfall with the aid of several kindly people connected with the University, we had found one, and had also located a house--the Anderson bungalow at 935 N. Virginia St. in the same block in which we were to live for the next twenty-six years. We couldn't move into it though until our furniture arrived about three weeks later. The rent was thirty-five dollars per month, which seemed to us rather high. We also found utilities considerably higher than they had been in Urbana. The war was on in full force, and we had to do without many food-stuffs that we had previously taken for granted. Sugar was limited and few cookies and cakes were made for a long time. We had to use substitutes for wheat flour, such as rice flour and a coarse mixture of other flours called Victory flour. People were economizing and buying Victory Bonds.

THE WAR YEARS AND FRED

The war had been going on in Europe since 1914, and many people here in America hoped that President Wilson's diplomacy would be able to keep us out of it, but this proved impossible. Dad was over the draft age, had a family, and was not called into service. None of Dad's brothers saw service in the war either, all except Dean being over age and he was exempted since he now had a family. My brother Fred, however, being single, enlisted in the Navy, May 8, 1918 at the age of twenty-four. He was sent to the Great Lakes Rifle Range at Fort Logan, and later to a training center at Rumford, Rhode Island, where he was in training for some months. This was the year of the virulent influenza epidemic which swept the whole country that fall, causing many thousands of deaths. Fred was taken ill with it and was sent to the hospital in Providence, R.I. Soon after his recovery the armistice was signed and he was spared active duty over seas. He was sent to a receiving ship at Brooklyn. From there he went on the supply ship, U.S.S. Dochra,

to Cuba for a few weeks. Then he was sent back to Brooklyn again to a receiving ship, and was assigned to the transport ship U.S.S. Kroonland, on which he made four trips overseas to help bring home the troops. On his last trip just before starting across, he had a bad fall on the soapy deck and hurt his back. He didn't report this injury though, as he was to have shore leave on reaching France, and he wanted to see Paris. They landed at Brest and he had two weeks ashore, one week in Paris and one in the Belleau Wood and Soissons area. When they got back to the States he received his discharge, and soon went to work again in Chicago.

In 1920 he came out to Reno where we were all living, and got a job that winter cutting ice up at Boca and at Grizzly Creek. In the spring he went to work for the Stone-Webster Co. on their Caribou project. This was a power job--cutting a tunnel from Lake Almanor to another valley--the North Fork of the Feather River. After this was finished he worked for awhile at Groveland, Calif. on the Hetch Hetchy project, then for a year aboard the S.S. Pres. Hayes, doing freighting from Puget Sound up and down the coast, through the Panama Canal and to Puerto Rico and Buenos Aires where he had many interesting experiences. Indeed I think I may say that, of all the family on both sides, he had the most varied and colorful life.

After his freighting experiences he returned to Reno and went to work for the State Highway Department as storekeeper. He worked there for twelve years, the last two as accountant and head of the office equipment supply. It was here that he met Myrtle Frey who was also employed in the office. In 1933 she "retired" when she and Fred were married. In 1935 the Nevada Republican Administration was displaced by the Democrats and all Republican employees were supplanted by Democrats. So Fred along with many others was out. He sold automobiles for about two years and then in January 1938 he began work in the Agronomy laboratory at the University under Victor Spencer, holding this position for nine years. In July 1947, although Spencer tried to keep him, he accepted the position of general storekeeper for the Chemistry Department. He remained with this position until the summer of 1953, when he resigned, it being too great a strain on his nerves. Moreover he would be eligible to receive his retirement allotment in a few months.

OUR BEGINNINGS AT THE UNIVERSITY OF NEVADA

Now I must get back to our beginnings in Reno. Dad found his work at the University very interesting. Dr. Maxwell Adams was head of the chemistry department, and he and Dad constituted the staff. The department was housed in the old stone building which was none too adequate. Dr. Adams was a very fine man, and working with him was very pleasant. The student body was quite small during our first two years, because of the war. We transferred our church membership immediately to the First Methodist Church of which, Dr. Adam's cousin, Dr. W. Lowther, was pastor. Perhaps that accounted for the warmth of our welcome, for at the close of the service when our letter of transfer was received, the whole congregation at Dr. Lowther's request came down in procession to the front of the church where we were standing and greeted us. Never have we seen that done before or since.

We liked our little cottage which was just across the street from the front campus, a rolling stretch of tree-dotted dawn, giving us a nice view from our big screened front porch and living room windows. At first the swift-flowing irrigation ditch running past the side yard gave us some concern. But Howard responded quickly to our warnings never to climb the high wire fence bordering it, so we soon lost our fear of it and came to regard it merely as a pretty little stream. Some of the older children of the neighborhood used it to swim in, and we enjoyed watching them. The climate seemed wonderful to us, having come from the hot sticky summers and cold raw winters of Illinois. The bright sunshine and mild fall weather were delightful. Our furnace seemed so tiny to us and moreover was out of commission with a broken grate. We found to our amazement that clear up until Christmas, when it was finally repaired, the small fires we were able to build right in the bottom of it, were entirely adequate to keep us comfortable. Luckily there was no snow nor cold weather that fall until after Christmas. I might say here though that in those first years of our life in Reno, North Virginia St. was not paved beyond Fourth St. and could get

quite muddy. In fact toward spring of that first year we saw an automobile stuck in the mud for almost half a day right in front of our house.

During that first Christmas vacation we went over to Berkeley to visit Grandpa and Grandma Sears, and Harry and Huldah. Clara was home for the holidays and was to be married at Palo Alto on New Year's day to Charles McCullough. Dean and Ethelyn came up from their home in Delano, Calif. and all of Jess' family came from Palo Alto. Some stayed at Grandpa's and some at Harry's around the corner. We all gathered at Harry's in the forenoon for the Christmas tree which held presents for all. What a big event that was! Robert took the gifts from the tree and called out the names and little Norman and Howard distributed them. Later we had a big turkey dinner at Grandpa's, and there were fifteen of us at the two tables. One day right after Christmas we left Howard with Grandpa and Grandma, and Harry and Huldah took Dad and me over to see San Francisco and the ocean. We went first to Golden Gate Park and strolled through its miles of lovely pathways. I shall never forget how invigorating I thought the cool damp air and the odor of the eucalyptus trees. Then we went out to Cliff House where I had my first view of the "mighty Pacific." We had a Chinese dinner at the famous King Joy Low's restaurant, and then went through Chinatown--my first experience with Chinese foods and Chinese surroundings.

Just before New Year's we all gathered at Jess' and Stella's home on Waverly St. for Clara's wedding. It was a big crowd to "bed and board" but with their large sleeping porch and four or five bedrooms they managed it. And it seems that all through the years, their home, especially after they moved into their even larger house on Parkinson St. was a favorite place for family gatherings.

On our return home for the second semester, the inroads of the war on the University attendance became more and more apparent in the rapidly dwindling size of the student body as the men students volunteered for service. Food-scarcities were becoming more noticeable, and everybody was planting "Victory"

gardens. Our back yard was just a small lawn which our landlord didn't want dug up. So we took advantage of the University's offer to the faculty members who desired, to plant vegetable gardens on part of the large unused area north of Lincoln Hall, the men's dormitory. The plot was about three blocks from our house, and after it was all planted, Dad with his hoe and accompanied by Howard and me, would go up every evening to tend it. Other University families would come to cultivate and water their plots, and we would all chat together and get better acquainted.

War gardening, however, was merely incidental to Dad's chief interest, which was in his teaching and research. Since coming to Nevada he had begun research which he hoped would lead to improved methods for the teaching of qualitative analysis, and had in preparation for publication in "School Science and Mathematics" two papers requested of him by the editor. So it almost seemed a token of the University's recognition of his efforts, when we learned his rank was now to be raised to that of associate professor and his salary increased to \$1800. During the next few years he published two more research papers and the first edition of his book on qualitative analysis, which made use of these researches in the development of a systematic scheme of analysis for the more common acid ions, a new idea in qualitative analysis textbooks. It also introduced for the first time the idea of a comparative study of the reactions involved in the separation of the various metal and acid ions. Considering the number of qualitative analysis texts on the market at the time (1922), his book appeared to be quite well received, and continued to be used in a considerable number of colleges and universities through a second edition.

In addition to these research projects and publications he was also giving attention to the interests of his students outside their regular classroom, culminating in the organization of Sigma Sigma Kappa. This organization has continued throughout the years, and is still going strong at this writing, and to which you, George as you no doubt remember, were elected when you were in the University.

GEORGE, JUNIOR IS BORN

We were now expecting our second baby toward the end of October, so I wrote Mamma in Pilot Grove where she was staying with Grandpa Harris, and persuaded her to come and visit us for a few months. She arrived in September and was immediately taken over by little Howard, and tyrannized over, too, I suspect, for she humored his every whim. I went to the Reno Hospital on Sunday afternoon, Oct. 27, 1918 and George Wallace Jr. (weight eight pounds) was born at 9:30 that evening. The 1918 influenza epidemic which I mentioned earlier in connection with Fred, was very bad in Reno then, and we had great difficulty in obtaining a special nurse which I was required to have for the first three or four days. However, one was found at the last moment and all went well. In those days a woman stayed in the hospital for ten to twelve days. Now that we already had a little boy I had my heart set on a girl this time. So when the doctor announced "a fine husky boy," I was quite disappointed right at first. And whatever it was that I said must have struck both the doctor and the nurse funny, for they both teasingly called my new little son "Genevieve" for several days.

An amusing incident in connection with the signing of the Armistice happened just the day before I went home from the hospital. It was a small two-story building with only about twenty-five or thirty beds, and at that time they had as cook an immensely fat colored woman named Hattie. A false report of the ending of hostilities had swept the country on that day--I believe it was Thursday, Nov. 7. Someone told Hattie down in the kitchen, and she dropped everything and rushed out into the lower hallway shouting, "Day's done got to Buhlin" over and over, and laughing and crying at the same time. I've often wondered if she had a brother or perhaps a son "over there." Well, just four days later the Armistice was signed, and even in Reno the whistles and sirens were going full blast, while in larger cities the celebrations were stupendous. I was of course not able to get out and see the manifestations of joy, but was just as thankful as anyone else that the terrible war was over.

For the remainder of this chronicle, I think it will make for easier reading for me to speak of George and Margaret instead of to them, so I shall use the third person instead of the second. And from now on Mamma shall be designated as they called her -- "Grandmother." Dad's mother was always "Grandma."

George Jr. was a husky happy baby, and throve right from the first. The winter of 1918-1919 passed happily and uneventfully, except that Grandmother left us right after Christmas and returned to Pilot Grove. Needless to say we missed her very much. It was in March that we bought our first car, a used Overland open "touring car," belonging to our minister, Dr. Lowther, and for which we paid \$450. I wish we could have had it while Grandmother was with us, to have been able to show her more of our surroundings -- surroundings with which we ourselves were almost totally unacquainted at that time.

About the middle of May we were dismayed to receive a two weeks notice from our landlord that we must give up our house. His daughter was being married and he was giving the house to her. A quick survey of the town convinced us that no houses were available to couples with small children. We had been planning to go over to Palo Alto and Berkeley for short visits with Jess and Clara and for a summer vacation along the Pacific coast, and had been advised by Dr. Adams that we should have no difficulty in obtaining suitable housing later in the summer. So we decided to store our furniture, make the trip and trust that better housing conditions would be available on our return.

Our first auto trip over the Sierras was really an epic -- not for its speed, but for its lack thereof. Nowadays most people make the trip over to the Bay region in about six hours, and even we make it in eight. That first trip took us a little over three days! We left Reno about two o'clock in the afternoon on Monday, June 2nd and before we had reached Carson City over a rough dirt road which skirted the west side of the valley close to the base of the Sierra foothills, we had jolted something loose near the engine and had to stop there overnight

while it was being repaired. We obtained a room in the Arlington Hotel and when Howard ran into our bathroom, he began to cry. We had had his tonsils removed about a month before this, and when he smelled the faint odor of antiseptic he thought it was another hospital and that he was going to undergo another operation, and it took us some time to reassure him.

The next morning as soon as we were able to get the car, we started up King's Canyon, the old and very steep unpaved road to Lake Tahoe. It was a magnificent drive though and Dad put the engine into low gear, and we chugged up at about five miles per hour and thrilled at the view out over the Carson and Minden valleys far below us--our first drive in the high mountains. We had a picnic lunch with us for that first day, and ate it on the shores of beautiful Lake Tahoe. That night, having driven all afternoon through the lovely but very winding Placerville Canyon we stayed overnight at Kyburz, a mountain resort inn. The next day we reached Sacramento about four in the afternoon, and had a flat tire just as we entered its outskirts. Dad had to get out and change it in the blistering heat--oh, how hot it was that day--and by the time we got into town we were glad to go to a hotel and "call it a day." With the wonderful highways of today it is hard to visualize the narrow winding dirt roads with the frequent and sometimes almost impassable detours of those days. It seemed that wherever the dust wasn't thick and deep, the surface was rough and rocky. No wonder it took us so long to make the trip! Tires, too, were very poor, ours especially, and we found it out to our distress before we got home again.

The next afternoon, Thursday about 4:30, we finally arrived in Berkeley at Clara's new home on Sierra St. a short street which we had some difficulty in locating. I fear we looked quite dusty and disreputable driving up to her nice home in our heavily loaded, open touring car. After a few days with Clara and Charlie we drove on down to Palo Alto for a week or so with Jess and Stella. Grandpa and Grandma had just recently sold their home in Berkeley and come to live with them. Harry and Huldah

had moved to Portland, Oregon some months before, where Harry had accepted a position as bacteriologist in the Oregon Medical College. As Grandpa's health was beginning to fail, it was deemed unwise for them to try to keep up their home alone.

While we were there several other members of the Sears clan also came, so there was quite a family gathering for a few days. Uncle Charley and Aunt Elizabeth, Uncle Norman and young Charles arrived from Kansas City. Uncle Dean, Aunt Ethelyn and baby Jeanne were up from Delano. Also Uncle Charlie McCullough and Aunt Clara came down on Sunday, June 22, for the day. A few days later when part of the crowd had gone, we drove over to LaHonda in the Coast Range mountains for a picnic, Jess and Stella in their brand-new Overland with their boys and Grandpa and Grandma, and we in our Overland with Uncle Norman and Charles. It was Jess' first experience at mountain driving, and on the way home he used his brakes too much instead of second gear, and soon the smell of burning rubber told us that he was beginning to burn out the brake linings. We all had to stop while Dad (with his experience gained on our long trip over the Sierras) gave Jess a lesson in mountain driving, and as Stella put it later, when she had gotten over her scare, "We lived to tell the tale."

Dad and I with the children, soon drove on down to Seabright, a little resort adjoining the Santa Cruz beach, where we rented a cabin and stayed for about a month. Howard enjoyed digging in the sand and splashing in the water, after the waves had receded each time. But he didn't like them as they came rolling in. George was too little to do much but try to get at the sand which he would of course try to put into his mouth. I spent my time watching and amusing him, while Dad played in the breakers with Howard.

Our trip back home over the mountains was made by way of Donner summit, and was just as slow as the one going over. To add to our troubles, our tires were beginning to show the effects of the bad roads. We had several punctures which Dad had to stop and repair with tire patches. Finally he had used his

last patch, and when we reached Donner Lake, although we were only about forty miles from home we decided to stay there overnight in one of the resort cabins. We had to buy one new tire there before coming on home. It was wise anyway to arrive in Reno early in the day as we had no home to go to. And little did we suspect that we would be living in five places within five weeks before we found a home. We bought a paper, scanned the "for rent" advertisements and were just starting out to hunt a temporary apartment when we met Dr. and Mrs. Lowther down town. They insisted on our coming to the parsonage. It turned out that they were getting ready to move in a few days into a roomy apartment on University Ave. near the campus. Dr. Lowther was giving up the ministry for a few years and taking a position on the University teaching staff. They were planning to go away on their vacation as soon as they got moved into the apartment. So we stayed with them in the parsonage a few days and then used our car to help them move. They then sub-let the apartment to us for the three weeks they would be away, and we began looking for a house.

It was then that we found the old Jones cottage at 917 North Virginia St. which was up for sale. It was being sold by the estate and the price was most reasonable--only \$3,000. So we bought it, borrowing money on Dad's life insurance policy. However we would not be able to get possession until Sept. 8, over a month away. So we must find something to move into as soon as the Lowthers returned. We found an apartment in Professor Layman's big house on University Terrace. (He was the University Librarian, and it was in their home that we had been invited to stay for lunch on that very first day in Reno when we were hunting for our first abode. This house was later sold to the Lambda Chi Alpha fraternity which George joined in College.) However, this apartment was already engaged by a Reno school teacher, and we could keep it for only nine days. She was to return on the last day of August. My, what a hectic time we were having! We couldn't locate a thing to move into from the Layman apartment, except a furnished room in a house down on Lake Street where we were not even to have the privilege of using the bath room, but had to use a lavatory at the back of the house, reached only by going

outside and around the house. With a four-year old boy and a baby, this was a most inadequate arrangement to say the least, but in eight more days we would be able to get into our own home, so there was nothing to do but make the best of it. Or so we thought. But we didn't know what good friends we had in the Palmer family--the mother and two aunts of Professors Stanley and Walter Palmer in the University--all cherished friends of ours in the church. The three sisters lived together over on Mill St. and hearing of our plight, invited us to come and stay with them until we could get into our house--not only invited but insisted. They were horrified at the straits to which we had come. And never have we been treated so wonderfully, so kindly and so cordially as by them. Always from then on they were to us Mother Palmer, Auntie Belle (Mrs. Ward) and Auntie Dora (Miss Stanley). When we left they refused the check I had made out to cover at least the cost of the food we had eaten, but I left it on the buffet anyway. No check however large could have covered their kindness and their hospitality.

WE MOVE INTO OUR OWN HOME

After all these vicissitudes, on Sept. 8, 1919, we moved into our own home where we were to live for the next twenty-four years. It was shabby and very old-fashioned, but was quite comfortable, and we planned to remodel it the following summer. The back yard had no lawn, but a great many trees, mostly fruit trees, and a chicken house and yard. So we kept chickens for a year or two, until Dad could remove some of the trees, plant a lawn and build a garage. That November and December we had what we called "the big snow." It snowed every day for two or three weeks, till it was so deep that the path to the chicken house was almost a tunnel, the snow on each side coming up as high as Howard's head. Then suddenly the weather cleared, and we awoke after a clear frosty night to find that a heavy frost or "pogonip" (the Indian term for "White Death") had coated every twig of bush and tree with a thick white coating that sparkled against the bright blue of the sky.

Truly, as the song goes, "The tree-tops glistened" and we did hear a few "sleigh-bells in the snow." Our yard with its many trees, and the campus across the street were a veritable fairyland. In about a week though, the snow, under the bright sunshine was all gone, and we didn't even have a white Christmas.

There were quite a few children in the neighborhood. Howard's first playmates were Emily and Junior Ross who lived a block north, and whose grandmother, Mrs. Summerfield, lived next door to us. His favorite playmates though were Stan and Ethel Palmer's two children, Bobbie and Ruthie. They lived around the corner on tenth street about a block away. Ruthie was just about his age and he was especially fond of her.

Late that winter Aunt Bertha and little Leland stopped off to see us on their way to visit Aunt Clara's and Uncle Jess' families. It was during this winter also that we had George baptized by our new minister, Rev. Lawyer. The following spring in May as soon as school was over, we began the job of remodeling our house. It was a one-storied cottage with very high ceilings, so by removing the roof, lowering the ceilings and adding five or six feet to the height of the walls we made a two-story house of it. Dad had worked out the new plans (with some help from me of course) during the winter, and got a builder to do the main job, while he expected to do a good part of the inside finishing. The University in those days had no summer school, so Dad had a long summer vacation and could use it to work on the house.

In July we received an offer from Iowa State College at Ames, which he felt might lead to greater advancement than he could expect from a small university like Nevada. Two things however, kept him from accepting it. In the first place our house was all torn up and in process of remodeling and would have been difficult to dispose of. In the second place we had promised Jess and Stella that we would keep Grandpa and Grandma Sears with us for the year, as Jess was having a

sebbatical leave from Stanford and had accepted an offer to go to the University of Minnesota for the year 1920-21. Since there appeared to be no other way of solving these difficulties we did not accept the Iowa offer. This was the second time we had turned down a better paying position, for we had no more than gotten established at Nevada than Dad was offered a good position as research chemist with the Westinghouse Co. in Pittsburg. This offer we had seriously discussed, pro and con, but finally decided against it because of the uncertainties connected with industrial research at that time, and the unpleasant living-conditions in the smokey city of Pittsburg, as contrasted with the invigorating climate of Reno, and the friendly and cooperative spirit of the Nevada people.

So that summer of 1920 we went on with the remodeling of our house. What a summer! It was most difficult to live in the house with two little children, and be pushed back and forth from one room to another, with the hammers and saws going, plaster falling, and old shingles and piles of boards (some of them nail-studded) all over the yard. We had to keep George in his play-pen most of the time. And in spite of that he did manage to step on a nail and run it into the side of his foot. The moving from room to room was the more continual because it was the kitchen and bathroom side of the house which was being turned into the living room and dining room side. This meant a complete upheaval and reversal. Of course there were no screens for a time (indeed not even doors or windows.) and flies and mosquitoes were plentiful. It was then that we noticed George's tendency to alliteration of his words. He would stand up in his high chair of evenings and command, (Woway, Teetoes.) and the word "good" for instance always began with the first consonant of the noun it modified, becoming varyingly boo-bye, noo-night, moomorning, etc.

By August the outside work was completed, the first floor fairly well finished, and the flooring laid upstairs. The studding for the bedroom partitions was in, but the partitions not yet completed. We had been wanting Grandmother and Madge to

come out to Reno to live, as Grandmother was still with Grandpa Harris in Pilot Grove, and Madge was working in Kansas City. So it was in August of 1920 that they finally came, and even though our house was hardly presentable as yet, we made it do, by hanging some long double blankets over the upstairs bedroom partitions to separate the east and west bedrooms. They had the east one and Dad, Howard, George and I had the west one which for so many years was to be George's room. Madge got a secretarial job downtown for awhile, but on October 1st, she obtained the position of secretary to Dr. Edward Records of the Veterinary Department on the campus. I think her work there was made much more pleasant and interesting by the fact that a very nice young man, Dr. Lyman Vawter, had recently come from Kansas to join the Veterinary staff. It wasn't very long until they began going together, nor too much longer until they became engaged. Madge and Grandmother had by then found a nice little cottage on Evans Ave. opposite the end of Eighth St., the Chrisman house.

It was about this time, late 1920, that Howard, whose health up until then had been quite normal, began having the periodic sick headaches which troubled our little lad for the rest of his short life. They would come on every few weeks and last for a day or two, during which time he would be nauseated and unable to eat. We had his eyes examined and took him to various specialists, none of whom could discover any cause for this distressing condition. In September he started to Kindergarten at the Babcock school, which consisted of just the kindergarten and first grade, and which all our children attended, going to the Orvis Ring school after completing the first grade. This Babcock school was later discontinued and made into administrative offices for the superintendent of the Reno schools. Howard enjoyed kindergarten very much, especially all the drawing and art work. His teacher said that one couldn't tell his handwork and drawing from her own. Ruthie Palmer was in his class, and they were still fast friends and loved to play together. She had to go to Mary S. Doten school though for second grade and Howard to Orvis Ring, as the division line was Sierra street.

It was about this same time, September 1920, that Grandpa and Grandma Sears were to arrive and spend the year with us. By now Dad had finished the room downstairs, which was later to be his study, and we had furnished it as a bedroom for them. There was a bathroom off the little downstairs back hall close by. The only way in which we were not quite ready for them was that the one-pipe furnace was not yet installed. So we bought a little oil heater for their room, electric heaters not yet having come into general use, in Reno at least. Grandpa had had a slight stroke the previous spring, in Palo Alto and was never able to go up and down stairs again. Dad had gotten Dr. Adams to go to the train with him to help get Grandpa into our car and up the four front steps into our house, one supporting him on each side. We were saddened to see how helpless he had become. And he grew steadily worse as his arterio-sclerosis progressed. He couldn't walk alone and it soon became evident that a wheel-chair would be a great help to get him from room to room and out onto the front porch during our mild sunny fall days. So we bought one and found it most convenient to have.

One evening Grandma had just turned off the little oil-stove and set it back to one side, out of harm's way as she supposed. Just a moment later, George, now just two years old, came trotting into the room and, running around behind the dresser, put one little hand palm down on the stove. The pain was excruciating, and the whole palm soon became a mass of large blisters. So we tended a very distressed baby for most of the night.

Grandpa's condition had now progressed to the point where it was very difficult for him to talk. One sunny morning while he was sitting on the porch and George was playing in the front yard, I made one of my frequent trips to the porch to see if both were all right. Grandpa was very much agitated, and pointed toward the street, but was unable to utter a word. There was my young son just starting to cross the street--a thing he had never done before. If a car had been coming poor Grandpa could not even have called out. We soon had to get a practical nurse, who

came for an hour or two every morning to help Grandma get him bathed, dressed and into his wheel-chair. By Christmas it had become almost impossible for him to articulate well enough to say more than two or three words at a time. On the evening of Christmas day, we had wheeled him into the living room near the large one-pipe register over the furnace, and had all gone into the breakfast nook in the kitchen to eat a light supper. Grandma had already given Grandpa his. Suddenly the noise of a terrible thump came from the living room. We all rushed in and there lay poor Grandpa on the floor beside the register, the wheel-chair on top of him. Apparently he had leaned forward to warm his hands and tilted the chair out of balance, or else he had had another stroke. Dad got him back into the chair and wheeled him into the bedroom and to bed. We had the doctor come to examine him, but he could discover nothing new. We wired Clara to come, and the next day he was much worse, almost in a coma, and in the early morning of Dec. 28, 1920, he passed away with Grandma, Clara, Dad and me at his side. They three accompanied his body to Palo Alto while I stayed at home with the two little boys. The funeral was held at the home of some very close friends of Jess and Stella. Harry came down from Portland. Grandpa was buried in Alta Mesa cemetery near Palo Alto. If he had lived until Jan. 25th, he would have been 85 years old, and the next December would have been their golden wedding anniversary. How Grandma missed him, none of us will ever know. She had spent every day in constant waiting on him for many months. It was hard for all his children too, to feel that the father whom they had honored and idealized so greatly, was gone. Grandma went to live with Clara in Berkeley for awhile.

By the time spring had arrived again (1921) we had plastered and finished the north bedroom upstairs (later to be Margaret's room) and the bathroom. The two south bedrooms were still unfinished, though now partitioned off. We invited Grandma to come back and visit us again, as she could have the newly finished bedroom and would not need to occupy the one downstairs, which would remind her of Grandpa's last days. This room was now Dad's study.

Soon after Grandma came we all went on a camping trip up at Lake Tahoe. The Reno Y.W.C.A. on whose board of directors I was for several years a member, owned a rather primitive little cabin at Carnelian Bay, and we were given the privilege of using it for a week. It was a tiny one-roomed house, with the side toward the Lake unenclosed except for a wall about three feet high, something like a porch would have. In fact the cabin was meant for just cooking and eating in. Grandmother and Madge went with us, and they slept on cots in a tent in front of the cabin. Dad, Howard, George and I slept on pallets in a lean-to tent at the back. Grandma slept in the house. There were no other cottages near, so we didn't have to worry about any lack of privacy. Tahoe was at that time (1921) only just beginning to become popular as a summer resort. Automobiles were the reason for that, though for several years more, the poor roads still held things back. There was no Mt. Rose road then, nor even the present one from Verdi via Floriston. From Verdi we had to go up the steep narrow Dog Valley grade, or via Carson City up the equally steep King's Canyon grade. We enjoyed our first camping trip very much in spite of the primitive accommodations. Madge and Dad had fun swimming, and Howard and George, wading and paddling in the water. We were expecting "little sister" in December so I didn't go into the cold water, but sat with Grandma and Grandmother on the sand and watched the others. We had our first experience of the speed with which one can get a bad sunburn in such a high elevation as Tahoe. Both boys were badly sunburned on arms and shoulders by the end of their first day, George especially. I think he actually ran a slight temperature all during our first night. So we had to put little cotton shirts on them under their bathing suits from then on.

Soon after returning home we took both grandmothers on a picnic to beautiful Pyramid Lake. The boys enjoyed the water there more than at Tahoe, as it was quite a bit warmer. And how they did enjoy climbing around on the tufa rocks. That must have been where George first got his urge to climb mountains, an urge which has apparently stayed with him all these years.

It was during this summer, just when he was about two and a half years old that we noticed two other tendencies in him. One was to run away. Our yard was not fenced across the front and sides, and there was an open gateway at the back. One day in desperation I got the old chicken yard fencing out of its storage place in the basement, and worked all morning pounding stakes into the side yard between house, garage and the Summerfield fence, and attaching the wire fencing to enclose a fairly large play area. Triumphantly I jumped my little son over this fence with his toys. My triumph was short-lived. I soon found the little scamp at large again. He had merely pushed and pushed at the fencing and had finally lain down against it until it was flattened out enough for him to crawl over it.

He loved to pound nails, so I would often give him a slab of the soft pine wood which we used for quick furnace fires, a handful of old nails and a hammer. As long as I could hear the pounding I knew I was safe in going about my work. When the pounding ceased I would run out and begin looking for him. They were paving North Virginia street that summer, and one day when they were doing our block, and the big steam roller was going up and down, over and over again, I let George follow along on the sidewalk. They finished sooner than I thought they would, and chugged back in the direction of town--George accompanying them. Evidently they outdistanced him or else his little legs got tired, for when I started out in pursuit upon discovering his absence, I found him wandering around in a vacant lot down on the corner of seventh and Virginia. When he caught sight of me he remarked very nonchalantly, "You founded me, didn't you?" It wasn't time for his nap, but I took him home and put him to bed. Evidently this untimely and enforced inactivity impressed him greatly, for this was the last time he ran away.

The other tendency we discovered in him about this time was his love of trying out new things--experimenting, if you will. One day he climbed on my kitchen chair, unscrewed the old-style round switch-plate where the light turned on, got his fingers inside the hole, and received quite a shock. Nothing daunted, he climbed up on the breakfast-nook table the very next day and tried

to reach the drop light which had not yet been replaced by a ceiling light. Another day he managed to climb up on the end of the kitchen work space which had a narrow shelf for spices above it. He was having a grand time shaking spices and condiments into my salt dish. Perhaps this tendency to experiment was merely the forerunner of the science laboratory. A favorite indoor game of both the boys was to sit at the table in the breakfast-nook and play at doing chemistry experiments, mixing in little bottles and jars which I would hunt up for them, all kinds of household and cooking supplies, trying to produce different colors and odors.

Now to get back to Grandma Sears. We were enjoying her stay with us, and she seemed as well as ever. One Sunday morning in October, though, she had gone up to her room after breakfast to get ready to go to church with Dad. I went upstairs soon after, and found her lying across the foot of her bed. Upon speaking to her I found that she could hardly answer me. I called Dad, and together we got her to bed and called our doctor. It seems that she must have had a slight stroke, and she had to be kept in bed with an ice-bag on her head. We had to get a practical nurse, as our third baby was due within five or six weeks, and I was not able to run up and down stairs. Clara came also to reassure herself as to her mother's condition. Grandma improved rapidly and soon was able to be up and around. We were convinced that her trouble really was a slight stroke, because it was some time before she was able to talk quite normally again. Her speech impulses would get mixed. For instance when she wanted to say "fingers," the word "toes" would come out instead. And names of her own family would elude her. The only way she could get the right name would be to mention three or four members of the family and then ask, "Who else?" Then we would be able to supply the missing name. It annoyed her greatly, but the trouble soon righted itself. When she was sufficiently recovered, Clara took her home with her.

MARGARET IS BORN

Thursday, Dec. 8, 1921 was another very happy day for us. At 5:20 in the afternoon our little daughter, Margaret Marie, was born, weighing seven and a half pounds, our first brown-haired child. She soon showed evidence of a happy disposition, and both her brothers adored her, George especially, as he missed Howard who was now away at school both morning and afternoon, being in the first grade. When I would take Margaret upstairs after breakfast for her bath, George would leave his blocks and toys in the dining room and traipse along after us and stay close by until after her feeding, often making his customary comment, "Isn't she the precious little heart," an expression he had originated himself.

On May 2, 1922, Madge and Lyman, who had been going together some eight or ten months, were married at our house with just the members of the family and one guest, their close friend Hazel Zimmerman, present. We had a nice wedding dinner, following which the ceremony was performed by our Methodist minister, Rev. Miller. While they were on their honeymoon, Grandmother moved into an apartment across the street from the house at eighth and University Ave., where she and Madge had been living, so that it would be available for them to occupy on their return. Fred was working over at Groveland, Calif. on the Hetch-Hetchy project and Grandmother was getting ready to go over and make him a visit in June.

One night at bedtime in June (the night before Grandmother was to start on her visit to Fred) I had a bad accident. I had just given Margaret her ten-o'clock feeding and put her back into her crib, using only the hall light. Just as I put my finger on the switch to turn this light off, I noticed the boys' bedroom door, which was diagonally across from my door just at the head of the stairs, was standing halfway open. It was a breezy night and, thinking the door would probably bang during the night, I crossed the hall to open it wide. Unfortunately, I had first carried out my impulse to turn off the light, and as I crossed the

hall again I missed my doorway, and walked straight off the head of the stairs. What a horrible shock to feel this plunge into space in the dark. My right foot struck a step about half way down, then my left a few steps further, and my right one again at the bottom, where I collapsed in a heap, luckily in the middle, for I might so easily have struck my head on the post at the bottom and been killed. All the way down I was making wild exclamations, which seemed to me to last for many minutes. Anyway they roused Dad, and he came dashing down after me in the dark without stopping to turn on the light. I remember my first coherent utterance, "Don't step on me" in a long drawn-out moan. He carried me up to bed, and upon seeing my right foot thrown out of place at a complete right angle to its normal position, seized it in both hands and with a strong heroic pull, snapped it back into place. He realized that it needed to be done immediately, so without waiting to lose his courage, he acted quickly. Then to make sure there were no internal injuries, he had the doctor come out and look me over. By this time I was having a nervous chill, so it didn't help any to have to follow the doctor's orders to soak my foot in cold water. Upon learning that I would have to wear a cast, and go on crutches for six or eight weeks, Dad 'phoned Grandmother to ask her to cancel her trip and come and stay with me, as I would need someone who could stay nearby to help me with Margaret who was only six months old. Upon 'phoning her we learned that she was having one of her premonitions which often visited her when there was trouble in the family somewhere. Though it was past her bedtime she was restless and unable to force herself to go to bed, so instead of going to visit Fred she came and stayed with us.

My right foot was so swollen that they were unable to put the cast on for about a week. It hung limp and useless, and Dad had to carry me every time I moved. After the cast was on, though, I soon learned to do a good deal of the work. By bracing myself between the built-in breakfast table and bench, I could give Margaret her bath, though Grandmother had to hand her to me and do all the carrying to and fro. I even did a little canning later on, hobbling around the kitchen on my crutches. I had to use them for nine weeks, and for a year I had a very stiff ankle, and limped noticeably.

Everything went well during the rest of the year. At Christmas time we went out beyond Bowers' Mansion somewhere with Madge and Lyman, and cut our Christmas trees. In those days when the children were small, an expedition into the nearby hills to cut our own tree was our custom. It was quite an exciting event to the children and provided a very pleasant outing. Howard had learned at school how to make lovely festoons out of colored paper, of many shapes and designs. George also learned in kindergarten to help with these decorations, and Margaret later on too.

In March (1923) we had a nice little visit from Grandma Sears, Aunt Linnie, her mother Mrs. Reed and Dorothy who was about two years older than Howard. They were accompanying Grandma back to Palo Alto after a year she had spent with them in Kansas City. Their visit was the occasion for trips and picnics to Pyramid Lake, Steamboat Springs and the Indian Reservation near Sparks. It was too early in the year to visit Tahoe, as the roads were not kept clear of snow in cold weather until a few years later.

In May I had to go to the hospital for a rather serious operation for general repair work. During my two weeks stay there, Madge took Margaret to her house while Dad took care of Howard and George at home. The University in those days always closed for the summer in May, so he was able to devote his time to them, doing the cooking and taking general care of them, both of which he was perfectly capable of doing. The very day I returned though, Margaret had to be sent home, as Madge had a very serious sick spell. Then Dad really did have his hands full until I was able to take over.

In August we decided to spend a few weeks over at Palo Alto, so rented a bungalow on Middlefield Road, which would be available on August tenth. Late in the evening of August fourth we received a telegram from Clara with the sad news that Grandma had just died in Berkeley of a heart attack. This was truly a great shock to Dad and all of us, as she had seemed so well when she had visited us in March. We were not quite ready to leave for our trip to Palo Alto, but hastily got things

together, and started out before daylight the next morning, in order to arrive in time for the funeral which was to be held at Jess and Stella's home. I wish I had the words to write a fitting tribute to her, for she had been unfailingly a wonderful wife and mother. The best tribute of all though, needs no words--the good lives and high character of her children.

It was soon after Grandma's death that the Sears sons and daughters banded together to give a \$1,000 scholarship to Kidder Institute in memory of their father and mother. All but one of the eight children had attended this school, a very fine academy which rendered great service to the youth of Northwest Missouri.

Soon after our return from Palo Alto, our little Margaret had to undergo an operation for a slight congenital hernia, but her recovery was quick. The fall and winter passed uneventfully but in the spring of 1924 all three children had measles, followed by whooping cough. They had all had whooping cough shots, but evidently these were not as effective then as they have become of late, for they all had it badly enough to lose considerable food during bad coughing spells. It kept Dad and me both on the jump of evenings after they had just gotten to bed, for George and Margaret were both small enough to need help.

We started Margaret in Sunday-school in June, though she was only two and a half years old. The boys of course had been going for several years. Already Margaret was showing pronounced traits of a very friendly and happy disposition, and she thoroughly enjoyed Sunday-school. On Children's Day, while the little tots of the Beginners' Department were lined up on the rostrum in the church auditorium, Margaret, who was too small to take much of a part in the exercises, leaned forward in the line and caught sight of George, who was at the other end among the five-year-olds, and sang out, "Oh, I see Georgie." A moment later she spied Howard sitting down in the front pew with his class, and sang out again, "Oh, I see Howard." People were smiling indulgently, but I, in the back row, crouched down a bit behind a large stout woman sitting just in front of me, before she should catch sight of me, and call out, "Oh, I see Mother." She talked

very early and very plainly as was natural with two older children in the family. Before she was two years old she could repeat many nursery rhymes quite plainly.

We thought it was time Howard should begin taking piano lessons, as he seemed very fond of music. The minister of the Federated church was moving away and wanted to sell his piano. It was not too good a piano but we, in our inexperience, thought it good enough to last a few years, not knowing how important the action of a piano is in helping a child acquire the proper touch. I started him out in his music lessons, but soon realized that I didn't know enough even to give him a good start, so began inquiring around to find a good teacher.

About midsummer we went on a camping trip over near Colfax where we were met by Uncle Jess, Aunt Stella and Norman, and where we stayed for several days under very primitive conditions. We were kept awake a good deal at night by trains, as Colfax was a division point on the railroad, yet we managed to have a very good time. I remember though on the way home, Howard suffered with one of his sick-headache spells. In August Uncle Harry's family visited us and while they were with us he had another. In September Uncle Jess, Aunt Stella and Norman came over and we had an overnight camping trip at Pyramid Lake, and the next day we rented a boat and the boys had a lot of fun rowing this boat.

OUR FAMILY IS BROKEN

What comes next in this story is very hard to write--the loss of our little lad--our eldest. On Wednesday, the first of October, he went to school as usual, but came home at morning recess with what we thought was one of his sick headaches. The next day though, it seemed more like a light case of flu. We called the doctor, but he was detained by an emergency case, and didn't get out until Friday morning. He, Dr. Lewis, had thought for some time that Howard's appendix was bad, and

after having a blood count made, he diagnosed his illness as acute appendicitis, and operated on him that evening. Before the operation, however, we insisted on having his throat examined by a specialist, because we had noted his difficulty in swallowing, and when he tried to drink, part of the liquid would drip out through his nose. Looking back on it, it seemed to us very queer, not to say very negligent even, or very ignorant, that neither doctor suspected polio from this symptom.

Howard seemed to be rallying beautifully from the operation, all day Saturday, and was even enjoying all the attentions lavished upon him by the nurses. But that evening his temperature began to shoot up alarmingly, and they called us back to the hospital. Dad stayed all night, and I got Grandmother to come spend the night, so I could leave George and Margaret, and go immediately if Dad should call me. About dawn Sunday morning, (Oct. 5, 1924) I could stand it no longer, and walked over to the hospital, Dad having taken the car with him. Howard's temperature had climbed steadily all night until it was up to 107.5° when I arrived, and he was in a coma. The doctor seemed helpless to do anything more. It was as if the blackness of despair descended on us when after a few low-pitched words with the nurse, he turned and left the room. It seemed so heartless to me, but the nurse soon made me realize that nothing more could be done and that the end was very near. What a blessing it is that nature causes a numbness to cloak our grief, at least for a time! There is no need to multiply words for to those who have not descended into this abyss, they are powerless to portray it. To those who have, they are not needed.

The doctor had explained this terrible and sudden illness as "ether pneumonia." So when at the time of the funeral, George and Margaret were both slightly ill, we still didn't suspect anything but light cases of the flu which was prevalent at the time. The next day though, Dr. Lewis came out without being called, and told us that two other Reno children had died, one just before Howard, and one just after, of infantile paralysis--in fact one had been in his room at school. Dr. Lewis was now convinced that

Howard had been stricken with it "at the same time that his appendix had flared up." So he called Dr. Albert, then director of the State hygienic laboratory, to come and get a sample of George's spinal fluid and test it for polio. The test proved to be positive. He told us therefore that on account of his being a surgeon he must not keep the case, but would turn it over to Dr. Kingsbury, a very able man. He did, however, come back with Dr. Kingsbury when he came to examine George who was still not improving.

Again the very bottom seemed to drop out of our world. Serum had been ordered, and arrived in Reno the next day. It was immediately administered to George. They didn't give it to Margaret, nor did they tap her spine, judging that though she probably had the same thing, it would be a very light case. This proved true, and we kept her down stairs in a big chair with blankets around her, and where I could watch her, as she was too little and not sick enough to remain covered in her crib. In a few days she was well, but not so with George. We got a nurse immediately, for he needed constant care. Dr. Kingsbury came twice daily, flexed all his joints and took excellent care of him. The serum caused great hive-like spots to break out all over him, which made him more miserable for a few days.

Since our house was to be quarantined, Dad, who felt that he should get back to his University work, moved over to Madge and Lyman's house. However, he called up often and that helped, for those were very dark days indeed, for us. After one relapse, when his temperature shot up alarmingly, George improved steadily though he was in bed for most of October. At the end of six weeks, the city health physician came out and fumigated our whole house, half at a time, with formaldehyde candles, after which Dad was allowed to come home.

Thanksgiving that year was a rather sober festival in our home, though we were most devoutly thankful that the two children left to us came through this awful sickness without any crippling effects. And looking back upon it now from this distance of thirty-five years, and indeed from a lesser distance, we

can say that we are deeply thankful that our Howard did not live, if living would have had to mean for him a severe crippling of the body, and perhaps even of the mind, as his brain might very probably have been injured by the extremely high temperature he suffered.

Christmas too was greatly saddened by our loss. Howard had taken such keen delight in making ornaments for the Christmas tree, and in helping to decorate it. George and Margaret missed him very sadly too. It had been George's habit to wait until Howard got home from school to go out to play. He would get home from first grade a half hour ahead of Howard, and after changing into his play clothes would wait till Howard came before running out to play. I would often suggest that he go out into the sunshine, and he would always say, "No, I'll wait till Howard comes." Now those happy days were over. I couldn't even bring myself to open the piano, which our little lad was just beginning to learn to play--and its lid remained closed for several months.

We kept George out of school until after the Christmas holidays, but his long absence didn't seem to set him back any, as he made a straight "A" card that whole year, as he did most of the time during his entire period of schooling, clear on through high school and college.

When summer came we felt it would do us all good to take a trip and get away from Reno for awhile. Harry and Huldah wanted us to come visit them, so we decided to get some camping equipment and drive to Portland. We were still driving our old Overland, and knew it would take us three or four days to get there, as its speed limit was only about thirty miles per hour. We had bought a tent and cots the previous summer, and now Dad made a folding table which would contain all our table service, and bought a luggage rack for the running board of the car. So we loaded up and started out, camping at three places on the way. The children, and in fact all of us, enjoyed it very much, in spite of the fact that the oil-gauge "blew out" and spurted black oil out through its dashboard indicator all over George's white sailor hat

and blouse, and we had to drive at snail's pace after repairing it as best we could. This trip, in fact, proved to be the last long one for the old Overland. While in Portland we enjoyed trips up the Columbia River highway and to Mt. Hood. Their rose-show was going on also and the parade of floral floats was really something to see.

DAD'S ADVANCEMENT AND RECOGNITION

That fall (1925), I was asked to serve as president of the Women's Faculty Club of the University, but the sorrow of losing Howard was still too heavy upon me to feel able to throw myself wholeheartedly into this office, and I begged to be excused. But the next fall when I was again asked to serve, I consented, and really enjoyed the year's work very much.

The really important event of this year (1926) however, was that Dad was made head of the Chemistry Department. Dr. Adams had been advanced to Dean of the College of Arts and Science and Vice-President of the University, and instead of bringing in an outside man for the Department headship, Dad was accorded this honor and responsibility. Needless to say we were very proud and happy. It showed recognition of his previous work in the Department, his ability as a scientist and teacher, and his enthusiasm for research. Here is the place, I feel, to say that over the years between 1926 and 1949 when he retired from active teaching, he built the chemistry department from a two-man staff to one having six Ph.D. men, a varying number of graduate assistants working toward their advanced degrees, and that he contributed largely toward giving it the reputation of being one of the best departments in the University.

In the spring of 1927, the Pacific Division of the American Association for the Advancement of Science (A.A.A.S.) held its annual meeting on our campus. It was the first time our university had had the honor of entertaining this meeting, and Dad and I both worked hard at our part in making it a success. He as head of the Chemistry Department had many things to plan and

arrange, and I as president of the Women's Faculty Club, had to engineer all the social meetings for the women of the group. It was a big responsibility to see that things went smoothly, for there was a large number of men present from schools all over the West--many accompanied by their wives.

It was at this meeting that the Chemistry Section organized an intersectional division to meet each year concurrently with the A.A.A.S., and Dad was chosen as chairman of its Committee on Arrangements for the next meeting. I think I should say here that it was Dad's strong belief that the science men of the University ought to make it a point to attend these A.A.A.S. meetings, and it was our custom, each June, to take the family and drive to wherever they were being held, up and down the West from Seattle to San Diego or Salt Lake City. At a good many of these meetings he presented papers, summarizing the various projects of his research. As a result of acquaintances made at these annual meetings, Nevada chemists were invited to join the Sacramento section of the American Chemical Society, thus bringing our chemistry group into closer touch with the western chemists. One meeting each year was held on our campus and another at Sacramento, at times when weather over the mountains would permit interchange of attendance, usually in September and October.

Not only did Dad (accompanied by the family) attend most of the Western Division meetings of the A.A.A.S. but he was occasionally sent by the University (expenses paid) to the larger meetings of the American Chemical Society, which were held at various places across the country. A year or so before this time, he had been sent to one of these at Los Angeles, and two or three years later, to one held in St. Louis where he had been asked to discuss one of the papers in a symposium on the teaching of qualitative analysis.

This year, 1926, also saw the revision and second edition of his book on "Qualitative Analysis," and the publication of the second of a series of researches on the "Fusion of Rare Metal Ores." Soon after this time, he published a correlation of the general chemistry of the metals with qualitative analysis and a number of book reviews for the Journal of Chemical Education. He also prepared by request a progress-report on the production and use of Tantalum, for

presentation before the meeting of the American Institute of Mining and Metallurgical Engineers, held in New York City. This report was later published as one of their technical papers. The next year (1927) he was made a consulting chemist of the Bureau of Mines--this in addition to his regular duties in the University.

BACK TO FAMILY LIFE AGAIN

About a month before Margaret's fifth birthday, she had a bad spell of upset stomach and was very sick. One day as she was lying on the sofa in the sunny south windows, crying I just happened to get a good look into her mouth, and there right behind her perfectly tight lower central incisors, were two new ones completely through the gums. No wonder she was sick. I lost no time in getting her to the dentist and he had to extract the baby teeth, which were found to have the long normal roots they should have at age five. The nausea vanished immediately and the new teeth soon came into line. We never did find out why they should have come in a full year ahead of the usual time.

In March of 1927 we bought our second car, an Oakland, which though a used car also, was a great improvement over the Overland. It was square-topped and boxy-looking, as most cars of that period were, had solid disk wheels, and a tool box on the front end of the left running-board--but it was a sedan--and no longer would we have to struggle with getting canvas curtains snapped on in bad weather. In August we went on a little camping trip to Mono Lake, taking Grandmother with us. We had never visited this lake but had heard much of its beauty. To our surprise we found the camping area quite full, and had trouble finding a good place to pitch our tent. We were able to get a room for Grandmother in the caretaker's cottage, and let Margaret share it with her, as the nights there were very chilly, it being about the same elevation as Tahoe. (I wonder if you children remember how much you used to enjoy these camping trips.)

Later that month, Harry and Huldah, with Elizabeth, Tom and baby Joan who was then about a year old, came to visit us. We all thought it would be fun to go part way with them when they were ready to start home. So we apportioned the two families in the two cars, and went as far as Susanville, where we rented an auto cabin (they were not motels then) to supplement our camping equipment, cooked our supper out of doors, and enjoyed the evening together. Next morning after they had started on their way home, we took George and Margaret through a big lumber mill there, where they saw the great logs yanked (with floor-shaking vehemence) out of the mill-pond up to the sturdy platforms, where giant saws began cutting them into suitable lengths for their journey through the different buildings. From these buildings they came out as lumber of various kinds. The noise, at certain stages, was deafening but we all got a big thrill out of seeing the process from start to finish.

The year 1928 brought several momentous events. But before telling of them I want to describe a lesser one which throws an interesting sidelight on the children's looks. In February, George, now nine years old, had just taken part in a Washington's Birthday program at the church, dressed in costume-black suit with knee-breeches, frilled shirt, big square buckles on his shoes, three-cornered hat topping a white cotton wig, tied with a big black bow at the back, and a touch of make-up. The next day Mrs. Adams and I were having one of our frequent chats over the back fence, and she was saying how handsome George had looked in his costume. "Of course" she added, "Maxwell and I have always remarked on how pretty Margaret is, and now we are going on over George's good looks. He is certainly a handsome lad."

In May, Margaret now six years old, had another spell of very sick stomach. It was so severe that we called Dr. Walker who was now our family physician (Dr. Lewis had died). After examining her he looked very grave and said he thought he should have Dr. Brown, his associate who was a surgeon, come and look at her. The verdict of their consultation was "acute appendicitis," and that she should be operated upon at once. Well that just floored us! All we could think of was the tragic ending to the same diagnosis given in Howard's case. It seemed just impossible to give

our consent. We let the doctors leave without it, but after an agonized hour of thinking it over from all angles, Dad followed them down to the office for more consultation, and then decided that we must bring ourselves to follow their advice. So we took her over to St. Mary's hospital that evening and Dr. Brown operated about nine o'clock. Dad was allowed to watch the operation, as indeed he had watched all those that various members of the family had ever undergone, and he was very much impressed with Dr. Brown's ability. It was certainly providential that we didn't wait till morning, for the clinical record (which I took the liberty of reading) said "acute hemorrhagic appendicitis with beginning gangrene." The next morning might well have been too late. So many people sent her nice little gifts and flowers, but the thing she treasured most was a letter written by her first-grade classmates in large childish script on tablet paper, and signed by all the children. She would read the names over and over, but was puzzled by one name--Mildred. There had been no one named Mildred in her room. When I inquired of her teacher, Miss McCormick, about her, I learned that she had entered the class about the day that Margaret was first absent. It turned out that she was Mildred Missimer, whose parents had just moved back to Reno after an absence of several years, and were living in the block below us with Mrs Missimer's mother, Mrs. Duncan. We didn't know it then, but this little Mildred was to become one of Margaret's two best girlhood friends. Margie Crawford (a few years later) was the other.

Just a month after Margaret's operation, we drove down to the A.A.A.S. meeting at Pomona College, Claremont, California, by way of Uncle Dean's in Lone Pine where Dean was the manager of the bank. It was our first visit to them, and the five children enjoyed getting acquainted with each other. We had to watch that George and the three little girls didn't get too lively with Margaret. After a few days visit there we drove on to Claremont where Dad attended the meetings, and then on to Ocean Park, a beach resort near Los Angeles, for a few days in the surf. One day while there we drove in to Los Angeles to

call on Papa's two sisters, Aunt Mattie Rummell and Aunt Virgie Crenshaw. It was the last time we ever saw them so I was glad we had this little visit. On our way home we joined Uncle Jess, Aunt Stella, Norman and Aunt Clara for a few days together at Seabright, where we shared a rented apartment, and all enjoyed playing in the surf.

Soon after getting home (it was in July) we received an invitation to go up to Lake Tahoe to a big barbecue picnic given by the Fulton family, of the University School of Mines. When we arrived we found that it was being given to promote the sale of lots in the Fulton tract. The picnic was fun, and there were rides on the lake in a big motor launch. We even let Mr. Fulton take us up into the woods to look at some "choice lots," though we had no intention of buying one. Well it was so beautiful up there that the upshot of the day's outing was that we bought "our lot" for \$500. And when Dean's family came to "return our visit" in August, all nine of us piled into our Oakland and drove up to show it to them and have a picnic. We were all full of plans to begin building the next summer.

When George was nearly nine, we heard of an excellent piano teacher, Margaret Ryan, and arranged for him to begin taking lessons from her. It was she who told us how inadvisable it would be to start him out on an old piano with loose action. We began looking for a really good one, and finally settled on the J. & C. Fischer parlor grand, and have never been sorry that we dipped so heavily into our savings for it. George took to his lessons right away, and was very faithful for a small boy about his practice periods. For the first three years (up until Margaret began her piano training) I went with him to all his lessons, so that I could observe, and learn how to help him practice. When I couldn't sit with him Dad did, and it soon became evident that he had unusual musical ability, even talent. And we quickly discovered that we had found a really outstanding teacher in Miss Ryan--she soon became "Margaret" to the whole family, and as the years went by she became not only a valued teacher, but a cherished friend and is still counted as one of our dearest and best friends. It was her policy to encourage her

pupils to play for others, and she had frequent recitals and repertoire-group performances, when the pupils played for each other and for the parents. We also encouraged both the children to play for anyone who asked them to play, either at home, or for school, church or other entertainments. As a result they never complained of being timid or "scared" about playing in public, and all through the years were called upon to take their places in the musical life of Reno. While in high school and college, first George and later Margaret acted as accompanist for the group-singing of hymns in the Sunday School.

OUR TAHOE COTTAGE

The following June (1929) we began building the cottage. Dad still had his summers free, and for that summer and the next, he devoted his whole time to it. It was to be just a small simple cottage, with living room, dinette, bathroom and one bedroom; also an unfinished upstairs to serve as a large bedroom capable of sleeping five. As the 50' x 150' lot sloped abruptly upward from the front, a little digging would provide a garage under the big front porch and living room. The cottage was to have a big fireplace, and eventually, though this took several years, an electric range and refrigerator in the kitchen.

First, we had to carry up camping equipment and establish camp back of the cottage site. This took several trips with the Oakland, with so many things to carry up--two tents, a bed, two cots, bedding and enough dishes and cooking utensils to get along with, not to mention a little box-like sheet-iron stove which was to be mounted on a stone pier, so I wouldn't have to stoop down to cook. The road was a far cry from today's highways. It was not too bad as far as Truckee, but between there and the Lake, there was a five-mile stretch, hugging the side of the hill and hardly wide enough for passing (called the Old Road) that was very rough. With our old "story-and-a-half" Oakland, loaded high, it is a wonder we didn't tip over.

When Dad had the lumber for building delivered, he used some of it for tent-flooring, a rough table and benches and a work table, over which he built shelves for dishes and food supplies; also for my "desert cooler." This was a sort of cupboard with slats for shelves, and a skeleton-framework covered with cloth. On top was set a large shallow pan, kept always filled with water and with wick-like pieces of cloth out on all four sides so that the whole cloth covering was kept wet. The resulting evaporation in that dry climate kept the inside of it very cool, so that butter was even nice and hard. It didn't matter if the water pan ran dry at night, for the nights were always cold. We had to go to bed early to keep from "freezing," after sitting around our camp fire awhile after dark. We had kerosene lanterns, donated by Fred, to light us at night, and no lack of privacy as there were no neighbors in those early days, except the Boardmans up the hill from us and screened from us by trees and bushes. When we went home for more supplies, we would just tie the tent flaps and leave all our silver and dishes and everything merely covered to keep off the dust, of which there was practically none.

Betty Boardman, about Margaret's age, was a good playmate for her, but there was no one for George. So as time went on, we would invite different ones of his boyfriends up for a week now and then--Junior Philbrook, Paul Seaborn and Lefty McDonough, chiefly. Margaret also had Mildred and Margie up to spend a week occasionally. Betty Boardman also had frequent visitors, so there was plenty of company for the children. And when they got older, we would sometimes have quite a house-party of their friends or of cousins. Dad's brothers with their families were frequent visitors.

Even that first summer we had several sets of guests. Grandmother and Fred came several times. Fred who was working for the State highway department, brought up another tent and some cots which were used by other guests also. Madge and Lyman came a little later, and Lyman and Fred gave Dad a hand with the roof, which was a bit hard for one man to manage. We even had our friends, the Spencers, up for a visit after we got

the roof on and the floor laid, so they could sleep inside-- though as yet there were no windows or doors. Except for this help from Fred and Lyman, Dad did practically all the work of building. He hired the fireplace built and, the next summer, some of the plumbing and wiring. We debated long over a suitable name for the cottage, but finally decided upon "Cedar-side," as the side-walls were covered with cedar shakes, it was on a side hill and had several cedar trees growing around it.

This summer of camping out was one of the pleasantest we have ever spent. The children had ravenous appetites and were brown and healthy--indeed none of us had one cold all the following winter. Dad spent most of his time carpentering, and I took the children to play in the water every day. In the spring before going up, I had taken a course of swimming lessons at Moana Springs near Reno, so that I could teach the children. Be it confessed right here that I never learned to swim much, but I could manage a few awkward strokes, could float and was not afraid to go under water. Being taller than the children I kept between them and deep water, taught them to duck under, to paddle, and in no time at all they were regular little fish. Three or four times each week, I would load the car with "kids" and drive them over to Sandy Beach about five miles east, a much nicer place to play and swim than our beach.

There was no lack of other amusements besides swimming. George made a butterfly net and caught quite a collection of butterflies. He became quite adept at catching lizards, which he would allow to run around over him, attached by a string to one of their hind legs. Margaret and Betty would play a lot with paper dolls which they made and colored. We all went on hikes up into the backwoods, taking along our lunch. As the children got older, they were allowed to go without us, and occasionally went as far as Watson Lake, about five miles back up into the "hinterland." They liked to swim there as the water in this little lake was much warmer than Tahoe's. There was an abandoned raft there too with which they liked to play. For a few years, George had a canoe which had been given him by the Missimers. Mildred's

uncle Harry Duncan had made it in manual training class in high school, but it was still seaworthy, and George became quite skilful in paddling it along the coastline.

We cooked and ate all our meals under the trees out back of the house that first summer, and it wasn't many weeks before little brown birds began hopping out of the bushes while we were eating. At first they didn't come very close, but we were careful not to frighten them, and the children would throw crumbs toward them, which they timidly picked up. Gradually the children lured these little birds closer and closer, finally sitting on the ground and holding the crumbs on their outstretched palms, and the birds soon learned to eat out of their hands. This delighted the children greatly. We never learned what species of bird they were. They never sang or made any sound, and always came and went by way of the underbrush, so we called them the "bush-birds." All that summer they were our guests at mealtime, but the next summer when we were eating inside we never saw them any more.

I think though that the chipmunks were their favorite pets. They became quite tame and would come up on the porch, and into the house even, and would climb up onto the children's knees and eat from their hands. There was one in particular that was Margaret's special pet for two or three summers, and she named him Ozzie. She would go out on the front porch the first thing in the morning and call, "Here, Ozzie," a few times, and he would come running and jumping from a dead stump on the lot two doors west which we later bought from Fred, and come right in and join us at breakfast. She would put little dabs of apple sauce in a small lid on the floor, and Ozzie would slurp away at it very greedily. One day she put bread with peanut butter on it in the lid, and after that Ozzie would have nothing to do with apple sauce. One year toward fall, George and Paul Seaborn, who was spending a week with him, made traps and succeeded in catching two chipmunks to take home to Reno with them. They named them Ike and Mike, George kept his in our screened sun-porch (that was before we glassed it in and made a sun-parlor of it). The chipmunk would race up and down the screens,

and frisk about, but refused to become tame. Meantime George was making a rather large and elaborate cage for him, with small tree branches in it and a revolving wheel for him to run on, until the time came for him to hibernate. We kept it in our big kitchen. It was a long time before the little creature caught on to the possibility of exercising on the wheel, but when he did he would run for miles on it. In the spring we took him back to the lake and set him free. A year or so later, a disease broke out among the chipmunks, evidently communicable to human beings, and of such a serious nature, something like plague, that the U.S. Forest Service carried on an extermination program which soon made chipmunks quite a rarity. We never saw Ozzie again.

Most of our summers until the children were grown, were spent at the cottage, and it provided for all of us a wholesome happy place for enjoying family life together, and a place much enjoyed by all who came to visit us. The house often overflowed with guests, some sleeping on the front porch, and even the tent which we would occasionally pitch in the back yard for brief periods. George's favorite place for sleeping was a cot on the porch, there he could look up at the stars which are unusually bright at Tahoe.

LIFE DURING THE THIRTIES

The year 1930 brought many new things. On the campus the big event was the building of Mackay Science Hall; and glad indeed were the chemistry, mathematics and physics departments to move out of their inadequate quarters into this fine new building. This was the year too when Madge and Lyman went to spend a year at Cornell University in Ithaca, N. Y. where Lyman completed the work for his Master's degree.

About the middle of March we were saddened by the news that Aunt Bertha had passed away of bronchial pneumonia. She had been weakened by a long siege of improper treatment for breast cancer. She was the first of the eight Sears children to

go. Leland was about fifteen and Harold twenty-one. A few years later their father, Uncle Will Stephens, died. Uncle Norman and Aunt Linnie were especially kind in looking after and advising the two boys.

During the summer we drove to Portland for a visit with Harry and family. This was the last long trip for the Oakland, as the next year we bought our first brand-new car, a Chrysler sedan. In September, Margaret began taking piano lessons and enjoyed them very much. She also showed a high degree of talent. The studio was still in Margaret Ryan's home, two blocks south of us on Virginia Street, though a year or two later she moved it into one of the upstairs rooms at our church for a few years.

In October or November, Margaret had a distressing accident at school. She was standing on the lower bar of the guard-rail around the outside basement stairway, holding on to the upper rail, when her feet slipped off and she fell against this upper rail breaking her two upper central incisors--her permanent teeth. About the lower fourth of each tooth was broken off in an irregular line. It was very painful, and one of our little neighbor girls, Mary Woodward, was sent to accompany her home. I got an emergency appointment right away with Dr. Rhodes, our dentist, and took her down. He had to put temporary cement caps on them, which were none too sightly, and which had to be renewed twice a year until she was grown, when permanent porcelain jackets were finally fitted over them. In the meantime, one winter while she was in Junior High School, a boy accidentally hit her right on these teeth with a hard-packed snowball, which he was aiming at another boy, and from then on the teeth began to turn dark, showing that the nerves were dying. So before the porcelain jackets could be put on, the nerve canals had to be cleaned out and filled. The teeth were dead and have had to be X-rayed every year or two since then to see whether trouble was developing. I remember how badly Margaret Ryan felt when Margaret appeared for her lesson the first time after this accident. These were two kindred spirits from the very first, in spite of the difference in their ages, and have remained so right

through the years. After Margaret had grown up and left home, never did she come back for even the briefest stay, without the two of them having a little get-together.

At Christmas-time we went up to the cottage, just for the day to cut our tree. I believe this was about the last time we did this, as many houses were being built on the government land up behind our tract, and it was difficult to find a place to cut trees that wouldn't be infringing on someone's property. We did go up for skiing every now and then and later on, George went up with his friends to enjoy this sport, as long as he lived in Reno. Margaret too, though more after she got into college, became quite a ski-enthusiast. Both of them loved to skate too, and learned when they were quite small. Our house on Virginia Street was ideally situated for skating, being right across the street from the lower end of the campus where Manzanita Lake was located. Dad even made wooden clogs that they could slip on over their skates, so they could clump across the street with their skates on all ready to go. If they got wet, as sometimes happened on our mild days when the ice was frequently slushy around the edges, it was so handy to be able to run home and change into dry things, and then go back for more skating. I used to enjoy walking across to stand on the "Tram" and watch them.

The next summer, 1931, we had visits from most of the Sears families, all of them, no doubt, anxious to see "the house that Dick built." I believe that so far, only our Reno relatives had visited it. Now it was practically finished and in condition for us to have bigger groups there. One day about the middle of June, a very hard rain came up. We were sitting at the lunch table, and I had just remarked that we were "all alone in the woods" (even the Boardman's had gone down to Reno for a few days), when there came a tapping at the back door, and looking through the glass pane, we saw two bedraggled brown-faced children peering in. A closer look revealed that they were Billy McCullough and Marion Sears. Uncle Charlie and Aunt Clara had driven up

unannounced from Berkeley (Marion was visiting them) and had sent the children in to see if this was our cottage. We were just in the process of remodelling already (trust Dad for that) and were adding a bedroom on at the back, having made the original bedroom into a dinette off the living-room. It was too rainy for anyone to sleep out on the porch, so after lunch we all came to Reno for their visit. We had a nice trip out to Pyramid Lake while they were with us.

In July Norman's daughter Louise came for a visit. I think she was enroute home to Kansas City from a sorority convention at Banff, Canada. Soon afterwards Dean and Ethelyn with their three girls came, and again we all went to the Lake. The bedroom was finished and the weather was nice, and moreover, Fred and Grandmother with their dog Teddy, were with us, so I think we must have slept some of the crowd in the tent. Fred had bought the lot, two doors west of ours, and was doing some excavation for a garage under the front of the house he was planning to build, and making the beginning of a cement foundation. (This was before he married Myrtle, whose folks already had a lovely cottage over near Brockway. After their marriage there was no need to build on his lot so later he sold it to us.) One day he took all five of the children for a swim over at Sandy Beach, and when they got back he said to Ethel and me, "You are a couple of lucky mothers. "-- a speeding car had all but run them off the highway on the way home, and three of the children and Teddy had been sitting in the rumble-seat. If they had tipped over, as he feared for a moment they were going to, the children might have been killed.

When we got back to Reno with our crowd, we were having the hottest spell ever recorded here (106°). In August, Uncle Jess, Aunt Stella, Norman and a young friend of his, came for a visit at the cottage, and I believe they were the last of that year's visitors. This might be a good place to mention that our cottage was a favorite place for the Chemistry staff and their families to come for an annual picnic. Soon after we had gotten the cottage completed to our liking, Dad built a good sized stone-paved patio and a nice stone barbeque stove just

outside the kitchen door, also a large round rustic table which was shaded by a beach umbrella. This made a fine place to have our friends come to eat with us. Also we usually had the Chemistry Club picnic there each year. This club had been organized by Dad, some years after coming to Nevada. It was composed of students interested in chemistry. It was partly social and partly of chemical interest. The Sigma, Sigma, Kappa society, mentioned earlier was the honor group of the "Chem Club."

I think this was the year that Madge and Lyman adopted the two children of their close friends, Neil and Florence Barber, who passed away within a few months of each other, Neil of a brain tumor, and Florence of meningitis. The Barbers had lived in Reno for many years, and had a lovely old home on Riverside Drive. Neil Jr. (called Ned) was eight years old and little Beverley only two and a half, when their parents died. Florence had asked Madge and Lyman, after Neil's death, and when she knew herself to be very ill, if they would adopt the children if she didn't get well, and they had agreed to this.

So now they had quite a family, as Grandmother too was with them. Since Fred's marriage she had made her home with them, though she occasionally came to us for a few months, even though our extra room upstairs was not made into a proper guest room for several years.

It was also about this time that Dr. Adams took a semester's leave from his duties at the University, and he and Mrs. Adams visited the Hawaiian Islands. Dad was appointed Acting-Dean for this semester and, although he appreciated the honor, he was not too enthusiastic over the type of work involved especially in addition to his duties in the Chemistry Department. The next year he developed a hernia along about Christmas time, and had to more or less drag around until it could be operated on in May. We jokingly accused him of having to pay the penalty of lugging so many rocks in building the barbecue for the cottage, but Dr. Brown said it was from a congenital weak spot, and would have happened anyway.

It was in 1932 that our beloved pastor, Dr. Carl Warner, asked Dad to take over the office of General Superintendent of the Sunday School. Dad agreed to take it, saying he would keep it for a year. Well it was a long year for he held it until 1957. Some seven years before, in 1925, when Margaret was four years old, I had begun teaching a class in the Sunday School and kept at this work for thirty-two years without a break except when for a month or two at a time I would occasionally get a substitute to take over for me while we went on a vacation trip. I have had classes of both boys and girls, and all ages from primary children to high school youth. For one year when George was ten, I had him in a class of boys, and later I had Margaret for three years. This work has been the most deeply rewarding and satisfying of any I have ever done outside the home. One instance shows what I mean. One little girl, Partee Weir, whom I had for two years, when she was in the seventh and eighth grades, moved to Washington, D.C. at the end of her eighth year in school. In 1953, she graduated from college, and during all these years she has written to me several times a year, sometimes just sweet loving letters and sometimes asking my advice as to what courses to take, to get the most out of college, or to prepare herself for something worthwhile. She seems to hold me in her mind, as some sort of an ideal, and tells me that she has kept all my letters. Dad and I spent an afternoon with her in Washington, on one of our eastern trips.

In November of 1957, when Dad was seventy-nine and I was seventy-two, we decided that it was high time for us to retire and let younger people take over our work in the Sunday School. I think we would have done this sooner but it seemed impossible to find workers who would accept our jobs. When the decision was finally made and the new appointees were ready to take over, we were deeply touched to find that the church had planned a lovely reception for us, to which the whole congregation was invited. It was held in the church parlor on Sunday afternoon November 24th, and we were presented with a beautiful framed water color picture of Mount Rose and the surrounding hills, by Minerva Pierce, one of the best of our local artists. They even gave me a beautiful orchid.

The best reward of all though, for both Dad and me is that George and Margaret and their children, are all faithful to the training we have tried to give them, and all take an active part in church and Sunday School work. And we do not fail to give a large share of the credit for this to dear Dr. Warner, who was their pastor and friend during their most formative years. He was truly an inspiration to them for Christian service, and they were both devoted to him.

In the summer of 1933, we took a really long drive across the country in our new Chrysler, to visit the Century of Progress Exposition in Chicago, and to visit many relatives and friends. We left early in June, so much to our regret, had to miss Fred's and Myrtle's wedding, which took place at the end of the month.

An evidence that George was growing up was his keen delight in being allowed to do part of the driving. He kept a log, jotted down in a little book, the number of miles and the places between which he did the driving, and I think they totaled around a thousand miles, before we got back home. Our first stop was for three or four days at the A.A.A.S. meeting in Salt Lake City. Then through Wyoming and Colorado, stopping at Estes Park and a visit of several days in Boulder with Uncle Robert and Aunt Cora. Next was a visit in Kansas City where we renewed acquaintance with all of Uncle Norman's family. Charles and Dorothy were both married, and each had a small baby. Harold Stephens was also married, and he and Laura with their little son Billy were there too. Dorothy and Bill Crebo were living in a lovely cottage which Uncle Norman owned at a little lake fifteen miles from town. It was a really nice house, not just a summer cabin like ours. We left George and Margaret with them while we accompanied Norman and Linnie on a trip which Norman had to take to Lexington, Missouri, where he had to render expert testimony in a legal case for his firm, the Kansas City Life Insurance Co. I was glad to visit Lexington, for I wanted to see the old "Baptist Female Seminary" where Grandmother had gone to school. I was much disappointed to find that it had been remodelled a few years before and made into a large apartment house.

A day or two later, Norman and Linnie took all four of us on a trip to the little town of Kidder so that the children could see the places where their dad grew up. On the way there we stopped overnight in Cameron at the home of Aunt Linnie's mother. During the night there was one of the worst thunderstorms I can remember, and much the worst one the children had ever experienced. The next day we drove on to Kidder and visited the place which Grandpa and Grandma had bought when they left the farm. A new house occupied the site, but it was the same yard. We had hoped to drive out to the old farm where Dad and all his brothers and sisters were born, but the heavy rain of the night before had made the country roads impassable, and we could get near enough only to see from a distance of about two miles, the big trees surrounding the farmhouse. But we did get to take them around over the campus of Kidder Institute where Dad had gone to school.

After leaving the Kansas City folks, we made a brief visit in Lamar, Mo. my birthplace, and got my cousin, Ward Staats, Aunt Maude's son, to show us the house where I was born, and also my Grandpa Fink's old stone house, and Aunt Virgie's fine big house which had been the show place of Lamar when they had lived there some twenty-five years before. We visited the cemetery where Papa was buried, in the same plot with Grandpa and Grandma Fink. Then we drove on to Springfield, saw my old home on Benton Ave. near the Drury campus, and took the children around over the college where Dad and I had been classmates so many years before. We also went to call on Dr. Shepard, our geology professor, and his wife, and a few of our old college friends.

Next we visited Uncle Charley and Aunt Elizabeth in their lovely sixth floor apartment in St. Louis, where the children enjoyed their first experience of operating an automatic elevator. I suspect they invented many excuses to go up and down. One evening Uncle Charley took us all to a big amusement park where one of the owners, a friend of his, had given him free tickets for the children to all the concessions. Unfortunately

George got very much nauseated while on his very first ride. It was a whirling merry-go-round of airplanes, and he made the mistake of looking out and watching the ground spinning beneath him. This somewhat dampened his ardor for the rest of the evening's amusements, but I don't think he missed any of them. The next day they enjoyed a swim with Aunt Elizabeth in Big River, and another day, a trip to the Forest Park zoo where they rode the elephant. Although Uncle Charley and Aunt Elizabeth had no children of their own, they certainly have always known how to make their nieces and nephews enjoy themselves.

One evening while in St. Louis we drove out on Hall's Ferry Road to have supper and spend the evening with our old Drury friends, Dr. and Mrs. William Knight and their four sons. Mrs. Knight was my dearest college chum, Ida Carter. Will was connected with the staff of the Presbyterian Hospital next door. How good it was to see them again!

We then drove on to Champaign, Illinois for a visit to the University of Illinois campus and a few days with Robert and Pat (Pauline) Sears. Robert was on the Psychology staff of the University. We enjoyed showing the children around the campus and the "twin cities" of Champaign and Urbana, and the houses we had called home while Dad was doing his post-graduate work. We were surprised at the narrow streets. They seemed little wider than Reno's alleys. You could hardly turn a corner without grazing the farther curb. They had not seemed narrow to us when we lived there. Many of them were still paved with bricks.

About the tenth of July we reached the home of our old Urbana friends, Herbert and LeOne Creek, in West Lafayette, Indiana. Dr. Creek was then head of the English department at Purdue University. We hadn't seen them since parting from them at the Colorado summer resort, when we were on our way to Reno for the first time. Finally on July 14, we reached Chicago and had four wonderful days at the Fair--the Century of Progress Exposition. It truly typified the many phases of progress of the past century, but I think we enjoyed most our visit

to the Planetarium--a permanent Chicago feature.

On our journey west again, we enjoyed our trip through Yellowstone Park. We were surprised to find so much magnificent woodland and so many gorgeous wild flowers, when we had expected only rocky grandeur and awe-inspiring geysers. All this appealed more strongly to the children than anything they had yet seen, and they would have loved to go branching off on hikes and side-trips if time had permitted. Our car performed perfectly on the whole trip, and the only trouble of any sort that we had was one flat tire just as we were pulling up to a cafe for lunch in the little town of Correctionville, Nebraska, where the correction could be made while we were eating. A stop of several days in Portland with Uncle Harry's family was the last one we made, and we arrived home on the third day of August. We had been home only a week or two when Uncle Jess, Aunt Stella and Norman stopped off for a few days on their way to the Fair.

Perhaps our long trip was too much for Dad, along with all the restaurant meals, and the overabundance of good food served us while making so many visits. Anyway he began having trouble with his stomach, which Dr. Brown diagnosed as peptic ulcer. However, with the medicine he gave him, and a careful diet, this trouble seemed to disappear within a few months.

Early in September, Margaret Ryan was to be married to Major Gordon Sampson, the culmination of a romance began several years before. Margaret and Mildred Missimer wanted to do something nice for her, so with Mrs. Missimer's help we arranged a luncheon party for all her girl pupils and held it under the apple trees on our back lawn, late in August. The wedding was solemnized in the Fulton home early in September.

The following spring we attended the A.A.A.S. meeting at Stanford University and visited the folks in Palo Alto and in Berkeley. This was the last visit we had with Uncle Charlie McCullough (he passed away the next autumn). Later that

summer (1934), Norman, Linnie, Louise and Dorothy came on a visit. Dorothy had left little Dickie with relatives at home. While we were at Tahoe with them, Dean and Ethelyn came with their three girls, Jeanne, Marion and Phyllis, and again we had a houseful--thirteen of us. And a jolly time. The Kansas City folks had driven out in their new Rolls-Royce. One day after Dean's family had left, we took the rest in both cars, and drove clear around the lake. Uncle Norman rode with us, while Louise drove the Rolls-Royce. We all declared, nevertheless, that Norman drove both cars.

George and Margaret were still taking piano lessons-- Margaret, who was about through Junior High School, was still having one each week, but George, about to finish High School, had for some time been taken only two a month. He had been accompanying the High School orchestra, and part of the time playing the clarinet in it, having taken lessons from Mr. Little. Each year while in Junior High Margaret and Mildred, to close their year's work, put on a piano recital, just the two of them at our house. We could seat about sixty people, by pushing the dining table against the wall and putting folding chairs in rows clear out into the sun parlor. Margaret had been taking art courses in Junior High and we made artistic programs for these recitals. Each girl would have a pretty new party dress, and a corsage, and as both girls did excellent work, these recitals were really very nice affairs. We always served punch and cookies at the close of the evening, and never failed to feel very proud of both the girls. They also played in the annual recital put on by all Margaret Sampson's pupils, as did George also.

The year George graduated from High School (1935) she persuaded him to give a solo recital. It took a good deal of persuasion, but she knew he had a large enough repertoire of really lovely pieces to be able to do it, and also that he was one of her best pupils and would do it well. The house was crowded, and the presence of all these friends gave George both a challenge and an inspiration. The recital was really wonderul, and not only were Dad and I, and his teacher fairly "bursting with pride," but George himself got a real bang out of it, and was elated to have put the finishing touch, as it were, on this the completion of his piano lessons.

Earlier this same year Dad had a very serious illness. For some weeks his stomach had been bothering him, but the symptoms were so different from the ones he had suffered after our long trip east, that he didn't even suspect an ulcer. One day he came home to lunch feeling dizzy and very tired. But after lying down for half an hour he felt better and went back to the laboratory. About mid-afternoon he became very dizzy again, left his lab class and started for his office. Dr. Lough went along with him and they had hardly gotten there when he collapsed with a very serious hemorrhage from the mouth. Dr. Lough sent to the rest-room for a cot, and he and Dr. Adams got Dad on to it. Then they 'phoned me to come. By the time I arrived Dad had regained consciousness. When I suggested that they help me get him into our car, Dr. Lough had to explain to me that it was not just nausea, but a hemorrhage and that he must not exert himself even to sit up. We got a doctor to come immediately, and he sent for an ambulance. Dad was lifted into, taken home, carried up to bed on a stretcher and not allowed to set foot out of it for three weeks.

The doctor came every day for some time. I took care of Dad, as the children were old enough to help all I needed, and to look after themselves quite well. They perhaps got a bit tired of the very simple food served at our table for the next two or three years, and may have yearned occasionally for pie or fried chicken, but Dad was so good about sticking to his bland diet that we didn't want to tempt him with forbidden food. For several months he carried his little bottle of cream and milk mixture, and two crackers to school with him, morning and afternoon, and even to church on Sundays to be taken between Sunday School and Church service. We feel that the ulcer was completely healed, for he has never had a recurrence of it in the many years that have elapsed since then.

The next two or three years seemed to fly by. Both children were doing excellent work, Margaret in High School and George in college, both being on the honor roll right along. I remember how proud we were when George received a letter from Pres. Clark of the University, at the close of his freshman

year, congratulating him on the outstanding quality of his work as a student. We were as much surprised as pleased, for it seemed to us a rather remarkable thing for a university president to do. George had skipped a grade and a half during his schooling, and entered college before his seventeenth birthday. He was perhaps a bit young socially, but not in his classwork. He had liked chemistry so well in High School, that by his own choice, he started in college to work toward the degree of Bachelor of Science in Chemistry. And, as his classmates often said, he surely had to earn everything he got in his chemistry courses, especially those under his own father, who seemed to "bend over backward" in making sure that George didn't get any special favors. He was initiated into Lambda Chi Alpha fraternity, but seemed to take a keener interest in associating with several of the fellows in his science courses than with his fraternity brothers. He and his girl friend of that period, Emogene Byars, and Margaret and "Lefty" McDonough, a close friend of George's, did a good deal of double-dating too, and it gave Dad and me such a comfortable feeling to know that Margaret was having her first experience of "going with the boys" in company with her older brother.

In the spring of 1936 Grandmother, while spending a few months with us, had a very bad gall bladder attack and suffered such pain that Dr. Brown was afraid of gall stones, but said he didn't want to operate and wouldn't unless it became absolutely necessary. She got better soon and was quite comfortable for a month or two. In July, back at Madge's, she had another attack which was so serious that the doctor felt that the gall bladder must come out. Grandmother didn't seem to mind at all. A few years before, she had to have her appendix out, and she had gotten along so well and had been so petted by the nurses, and visited so frequently by members of the family that I think she really enjoyed the experience of hospitalization. So this time she felt it would be the same way. But, poor Grandmother! She was miserable after the operation, had to have an uncomfortable drainage tube, and failed to regain her appetite. She was so disappointed that her food didn't taste good and that she had no appetite for any of it. About a week after the operation,

she suffered a heart attack, slipped into a coma, and that night she passed away, with Madge, Lyman, Fred and me at her bedside. Dad and Margaret had gone back to the lake where we had all been, doing some carpenter work when summoned home, and we couldn't get word to them until the next day. It was a sad time for all of us, and hard to give her up, but her life had been full of change and disappointments ever since Papa had died, and we were so glad that she didn't have to suffer a long and lingering illness. She was buried in our plot near little Howard, who had been so dear to her.

It was this summer of 1936 that George played the pipe organ for all the Sunday services at our church. He had been given lessons by Professor Corris (paid for by the church) in return for substituting for the regular organist who was away for the summer. He enjoyed this experience, saying he felt like he was playing a whole orchestra at once. I forgot to mention that he was playing in the University orchestra as their piano accompanist, and was also playing the clarinet in the University band.

During the year 1938, Dad received the honor of having his name and achievements included in "Who's Who in America." This gave us great satisfaction, because it was a notable recognition of his work as a scientist. Since then he has been listed in "Who's Who in Education," "American Men of Science" and other books of this type. A year or so later, he was asked by the A.C.S. committee on Professional Training of Chemists to visit and make reports on a number of universities and colleges which had applied for accreditation. So for the next year or two, he made trips to quite a number of these schools, in addition to his regular work at the University.

During the summer of 1938 we had such a pleasant trip to San Diego to attend the A.A.A.S. meeting, where Dad presented a paper before the chemistry section. There were

some lovely parties for the ladies of the group, including a luncheon at the Coronado Beach Hotel. The children and I enjoyed also the really fine San Diego zoo. George was fast becoming a camera enthusiast, and he was interested in getting pictures of the animals. The year before, I think it was, he spent a goodly share of the money he had made working for an electrical firm during the summer, to buy a movie camera.

On our way home, we stopped over in Los Angeles for a Drury picnic. There were quite a number of Drury graduates living around the Los Angeles area, who got together quite regularly for meetings and picnics, and it was a treat for us to see and chat with old Drury friends we hadn't seen for many years. We drove over to Whittier that evening for supper with the John A. Whalens--"Pat" and Etta. Pat had been Dad's roommate at Drury.

Late in this same summer of 1938, just as we were getting ready to return to Reno from our last stay at Tahoe before school should open, George had an accident that just missed being very serious indeed. It was full moon and he thought it would be so lovely to wait until evening and come home by moonlight. Something seemed to be wrong with one of the headlights, so during the afternoon while Dad, Margaret and I were packing up for the trip home, he started to examine it. He was using a screw driver to pry the ring off, when it slipped and flew up toward his face. The end of the screw driver hit him right in the eye and severed the inner sphincter muscle, controlling the movement of the eyeball. His eye couldn't pull back into position. We didn't know just what had happened of course, but lost no time in getting home. It was a Sunday afternoon, and Dad had some trouble in finding a good eye specialist in, but finally located Dr. Creveling, whom we had never had before. He proved to be able to handle the situation though, took George to the hospital, where he took several very delicate stitches to join the cut edges of this muscle. Another quarter inch and George would have been blinded in his right eye. He had to stay in the

hospital for four days, and then had to wear a patch over that eye for some time. He was just entering his senior year in college and found it a bit hard for a month or two, to read and study, as proper focusing was slow in coming back to normal. For the next few years he had to wear glasses for studying.

About a month later we were proud to learn that he was one of only three out of the whole senior class, elected in the fall semester to Phi Kappa Phi honor society, the other two being Elizabeth D'Alessandro and Conrad Martin. Those elected in the fall were always the most outstanding students of their class, and one of them was quite sure to turn out to be the Gold Medalist at Commencement time--the one holding the highest average for the entire four year course. As it turned out he and Elizabeth had made exactly the same average, so a gold medal was awarded to each of them. George was invited to play piano solos at the Phi Kappa Phi banquet, held annually at Commencement time. Although he had finished his piano lessons four years before, he got Margaret Sampson to give him a little special coaching, and worked up Liszt's "Hungarian Rhapsody No. II" and "Le Petit Ane Blanc" by Ibert. He did them brilliantly, and they "went over big" with his audience.

Margaret was graduated from High School that same spring, and we were proud of her record too, though it seemed that the University Commencement overshadowed somewhat that of the high school. She also had been an honor student all the way through, and had won her three "R's," the bronze, the silver and the gold, for high scholarship. She belonged to the Three Arts Club on account of her interest and, I think I can honestly say because of her excellence in two of them--music and painting. I think if she had gone on with it, she could have developed considerable ability as a portrait painter, for even at high school age, she could capture the likeness of a face remarkably well. It was about this time that she began taking vocal lessons from Dorothy Post, wife of Professor Post, Head of the University's music department. She took them intermittently all through college, and got sufficiently proficient so

that she occasionally sang solos at church and social affairs, but not to the extent that she played piano solos. Her voice was sweet and true, but she was just too busy to go into vocal work as intensively as I wish she might have. I think she really enjoyed group-singing more than solo work, and she took part in the big yearly presentation of Handel's "Messiah," and in other concerts given by the University choral group. But I am getting too far ahead.

George had for some time planned to continue his education through the Ph.D. degree in chemistry. He made application for an assistantship at certain of the larger universities, outstanding for their work in the field of chemistry and was offered either an assistantship or a scholarship by four: California Institute of Technology, Johns Hopkins University, the University of Illinois and the University of Minnesota. For several reasons he chose the latter, and began making plans to enter there in the fall. This was the year of the San Francisco World's Fair on Treasure Island, and Dad, Margaret and I attended it for a few days, but George had a job for the summer and couldn't go with us. We visited with Clara and took her over to the fair with us one day. I think it compared quite favorably with the Chicago Fair.

In August of this year, 1939, we tried to work up a complete Sears family reunion at Tahoe, and succeeded in getting together at least a few from each of the families except one. Charley and Elizabeth were unable to come. There were seventeen of us in all, and we had to sleep some of them at an auto court in nearby Lake Forest. Those present were Norman and Linnie; Jess and Stella; Harry, Huldah, Tom and Joan; Clara and Bill; Dean, Ethelyn and Phyllis, and we four. Some of the younger generation were married and gone from the home nest or were working. We ate all our meals in the patio, sat around and visited, went for hikes and swims, and the youngsters also enjoyed the canoe. All enjoyed horseshoe-pitching at the back end of our lot, and there was much picture-taking both stills and movies. Altogether it was a very happy jolly time.

This was also the year Dad completed his second book on which he had been working for some time, "Essentials of General Chemistry." It was published by the International Textbook Co. The next year, in collaboration with Dr. Deming, a member of his department, he published the Laboratory Manual to go with this work.

It was also in 1939 that Dr. Lough, a member of Dad's chemistry staff, was leaving for a new position elsewhere, and wanting to dispose of his property, offered it to us first. It consisted of a house on Hillside Drive, a large vacant lot, 70 x 226 feet, facing on both Hillside Drive and Alta Street, and a ten-acre olive orchard in a cooperative near Oroville, Calif., including the cannery which processed the olives. We finally decided to buy the large lot and the olive property. We have later built two houses on the lot, and have received from the olive sales a very good rate of interest on that investment, and we lived in one of the houses for some time until we could build the other in which we now live.

The following year 1940, Madge and I were initiated into the P.E.O. Sisterhood on the same evening. Belonging to this fine group of women has meant a great deal to me. It has been one of the most enjoyable experiences through the years, that I have ever had. I am sure that Madge feels the same way about it too. She served as president of our Chapter J in 1948-'49, and I was president the next year, 1949-1950.

OUR CHILDREN IN COLLEGE AND GRADUATE SCHOOL

In September 1939, George, not yet twenty-one, departed for his graduate work in the University of Minnesota, and the three of us left at home felt very bereft for a time. However, getting Margaret launched into her college work at Nevada, kept us from feeling it too greatly or too long. We decided to rent

one of our bedrooms so as to have that extra money to bring George home for Christmas. So Margaret moved into George's room and we rented her suite of dressing room and bedroom to Dr. Loring Williams, the new man who came to take Dr. Lough's place in the chemistry department. He used the dressing room as his study, and soon fitted into the family pattern very pleasantly. He took his meals at Mrs. Missimer's, except for Sunday night supper, which I gave him with us in return for his being so little trouble. He remained with us for two years, until the time of his marriage to Margaret Jensen, one of Dad's former students.

George did come home for Christmas, and how good it was to see him, and hear at first hand about his life in a really big university, and of his experiences in Pioneer Hall, the huge men's dormitory. Having lived just across the street from the campus here, he had known practically nothing of dormitory life. He had gained sixteen pounds too. Not that the dormitory meals were better than Mom's, but the men were allowed to carry bottles of milk to their rooms after dinner, and George had taken full advantage of this privilege. This privilege was revoked later when empty bottles in large numbers were found under the beds of some of the fellows. George was always very faithful about his "weekly contact with home" as he called his letters, and never a week passed that we didn't hear from him.

Margaret was soon well launched in her college courses, and was finding college life very pleasant. She and Mildred both joined Delta Delta Delta sorority, and were active in campus Y.W.C.A. work. We were glad to have Margaret become a member of the Y.W. cabinet--it was a good balance-wheel to her sorority activities. She was majoring in English, and minoring in Art, and loved to sketch and paint. (Even as a child her chief amusement had been drawing and coloring, chiefly girls heads and faces, and frequently she named them and wrote little stories about them. She was quite good too, at writing poetry.

During the summer of 1940 she wanted to try the experience of working up at Tahoe. Many college girls worked in the resort dining rooms. But the place which she found did not have any other people working there, and she was much disappointed. The work was hard and dull, and not very well paid. So she stayed at it only about a month. During that month, Dad and I, accompanied by Dr. Williams and Harold Heinen, a graduate student, drove up to Seattle to the A.A.A.S. meeting and to meet George who was coming home for the summer. He was traveling via Canadian Pacific and stopping off at Lake Louise for a few days. He met us in Seattle, attended the meetings with Dad, and then we all drove home via beautiful Crater Lake and Mt. Lassen National Park, where we had to follow a pilot car for some miles between snow banks higher than our car. He got some fine moving pictures of all these scenic places.

This next school year, George didn't come home for Christmas, so Dad, Margaret and I, being without him for the first time at Christmas, were quite pleased when Jess and Stella invited us to come over to Palo Alto for the holidays. Margaret was being sent as a delegate to the Y.W.C.A. mid-winter conference at Asilomar near Santa Cruz, which fitted in very nicely with this plan. Harry and Huldah, with Tom, Joan and David, were driving down from Portland to join the group, Clara and Bill came for the Christmas tree and dinner. For the dinner Margaret made clever place cards, using instead of names, little sketches of everyone or some identifying peculiarity, by which each would recognize himself and find his place at the table. These caused much merriment. Then too, she, Tom and Bill had procured some very amusing trick presents for everyone, and we had a really hilarious evening. After Christmas was over, Margaret took the train on down to Asilomar and had a very inspiring experience at the conference.

The outbreak of World War II, on Dec. 7, 1941, in the fall semester of her Junior year, made quite a change in the atmosphere of the campus. She was wont to say that Pearl Harbor broke out the day before she got out of her teens. She had been going

with Howard Campbell, a classmate, and he of course along with many of the men students, was anxious to get right into it. He joined the Air Corps and soon went into training. Social life on the campus was much curtailed, and there was an air of gloom over everything. I suppose it had been much the same back in 1918 but not having a young daughter in college then, we weren't as acutely aware of it.

When summer came, Margaret, Dad and I took another long auto trip--this time in the Dodge we had bought about two years before. We wanted to visit George in Minneapolis, and have him come home with us for a month before the beginning of a new school year. Now it was Margaret who helped Dad with the driving, I did very little of it. We went by way of Rocky Mountain National Park, where the summit is 12,183 feet--a magnificent drive up among great rugged peaks. Part of the way we were in, or even above the clouds. At the summit, reached about noon one day, we stopped at a cafe-museum. Suddenly a terrific thunder and hail-storm broke around us, and we had to wait awhile before dashing for the car.

On leaving this scene, we drove on down to Boulder for a nice visit of several days with Uncle Robert and Aunt Cora. They took us over the large campus of the University of Colorado, and to a University picnic that evening up on "Flagstaff," a beautiful picnic place high above Boulder, overlooking the surrounding country. The next day we had a sightseeing expedition in Denver which Margaret especially enjoyed. We went through the wealthy residential area, the parks and to the top of the Daniels and Fisher tower, twenty stories up, where we could look out over Denver and the plains to the east. Margaret kept a diary of our whole trip, writing down each day where we had been and what we had seen. It is preserved along with other family papers.

We had nearly a week with Norman and Linnie in Kansas City, and such a nice time in spite of the heat. It was around or above 100° all the time we were there. Dorothy and Bill Crebo with their children, Dicky and Nancy, were living in Kansas City

then, and Dot and Aunt Linnie took us shopping in the big stores. Another day they took us through the Nelson Art Gallery, which thrilled Margaret no end, and out to Uncle Norman's farm. One day Uncle Charley (he and Aunt Elizabeth had moved from St. Louis to Kansas City) had Margaret dress in her best and go with him to lunch and the floor show, a miniature Ice Follies by Olympic skaters, at the beautiful Muelebach Hotel. She was quite flattered to have Uncle Charley be so nice to her.

A brief stop of two or three hours near Altamont, Missouri, to visit Leland Stephens, Aunt Bertha's younger son, and his young sixteen year-old wife Louese, and their two day-old baby, broke the last lap of our trip to Minneapolis. When we arrived on July 25th, they were having a record breaking hot spell (104°). Such sticky heat--we fairly steamed. But it was worth enduring to see our boy and his work. He had gotten us rooms at Stanley and Mabel Hagen's, one of which he was to occupy the following year. He was just beginning to go with Betty Hansen, Mabel's sister, and he and Betty, and Dick Larrick, one of his chemistry friends, took Margaret out to dinner and dancing while we were there. Of course we went around over the campus, to see as much as possible of the University--the Chemistry Building, the equally huge Auditorium, the new \$2,000,000 Student Union Building and others. We also drove around the lovely residential sections, and visited many of the beautiful lakes and parks with which the city abounds. The Minnehaha falls were especially interesting. Minneapolis, I think, is the most beautiful big city I have ever visited.

We left there on July 29th and drove north into Canada as far as Pigeon Falls, a beautiful spot, then back across the border and on to visit the great open-pit iron mines at Hibbing, Minn. From there we went to Lake Itaska Park, where we saw the source of the Mississippi River--just a tiny stream. We had a most interesting hike of an hour or

two through dense, dim forests in the park. We followed the Bohall Trail (having left the car in a parking area), and George, with his movie camera, was hunting for deer or any other wild life he might encounter. He didn't have much luck, but it was a beautiful hike.

Other points of interest on our way home, were the Badlands and Mt. Rushmore Memorial Park in South Dakota. The highlight of the trip was our second tour through Yellowstone Park. The night before we arrived there, we spent at Red Lodge, Montana, and while we were awaiting supper in a cafe, George suddenly jumped up and rushed across the room to a table opposite ours. There sat Dr. and Mrs. Lind. Dr. Lind was head of the Chemistry Department at Minnesota, and we had missed seeing him there as he was on his vacation. They had been friends of ours some years before, when Dr. Lind was head of the U.S. Bureau of Mines in Reno. He had been exceptionally kind to George when he first came to Minnesota and seemed to take quite an interest in his career. (It was largely through his insistence on the need of trained chemists for war work, that George was kept at his teaching and research instead of being drafted into the army.) We all spent the evening together and had a very pleasant visit.

The next morning we drove on into Yellowstone Park where George took numerous pictures and many movie scenes. We watched the bear-feedings, saw Old Faithful erupt many times--by daylight, moonlight (the moon was full) and flood-light, climbed down to the bottom of the Lower Falls and up again--about seven hundred steps each way. This time, even more than on our first trip in 1933, George was wishing we could branch off onto some of the pack trails and go camping. Both he and Margaret, I think, were glad when we finally reached Nevada and smelled the damp sagebrush, after a shower. We took one last side trip out of Ely to visit Lehman Caves, which proved most fascinating. We had to have a guide of course, and he explained the many beautiful formations in the cave. We finally reached home on the evening of August 8th, having taken twelve days for the trip, and a most enjoyable trip it was.

THE FORTIES BRING MANY CHANGES

I have now gotten my story to a point where George and Margaret will remember events and their significance much better than I, so I shall merely touch on the outlines of things that happened to our family during these years. George and Betty became engaged in February 1942, and in the early fall she came out to visit us. On December 19th of that year, they were married in a beautiful church wedding, with a Christmas setting. I am so glad that I could make the trip to Minneapolis for the occasion. Dad and Margaret were both busy in the University and couldn't go. Mrs. Hansen and Betty's sister Mabel, were so lovely to me, and I had a wonderful visit, and got acquainted with the family. George and Betty had obtained a third floor apartment until he would complete the work for his Ph. D. degree, which he did by Christmas, 1943. He had been elected to the Sigma Xi honor society shortly before the granting of the degree, and out of several good positions offered him, he chose that of research chemist with the Grasselli division of the DuPont Co. in Cleveland, Ohio.

Margaret graduated from the University of Nevada in June 1943, having been on the honor roll several times. Her scholastic record was not as high as George's, but I think her extracurricular activities were more varied, and of greater value to her. My P.E.O. chapter initiated her as a member, around Commencement time, and the very next meeting they gave her a lovely shower, as she and Howard Campbell were to be married as soon as he got his commission as Second Lieutenant in the Marine Air Corps, and a furlough, presumably toward the end of June. We got all ready for the wedding, and then just waited. The leave came in late July, and we had only three or four days to do the last minute things, and to issue telephoned invitations. It was a big church wedding just the same, on July 26, 1943, and a very lovely one. They spent their brief honeymoon at our Tahoe cottage. Then Margaret came home for a week or two, till Howard got located in his new assignment in southern California, when she went to LaJolla (where they would live) and could hunt for an apartment.

In the meantime we had sold our big house at 917 N. Virginia St. where we had lived for twenty-four years, and on August 18th had moved into the six-room brick cottage on Hillside Drive that we had built three years before. Just after Margaret had left for LaJolla, late in August, George and Betty came for a visit. This was just a few months before George was to receive his degree. We were all so sorry that, not having been able to come to the wedding, they should just miss seeing her this time. But George had been teaching in the summer school and couldn't get away any earlier.

When Howard was sent out into the Pacific war area in the fall, Margaret took a position teaching Second Grade at Ruth, Nevada, for a few months until Christmas time, when she came home again, as she was by then expecting her first child. In the following April, when Dad was sent to the A.C.S. meeting and was gone ten days, I was so glad to have Margaret with me. While in Cleveland, Dad stayed with George and Betty, George having completed his university studies and was now researching for DuPont in Cleveland where he and Betty had the whole third floor of a large private home.

Several important events took place during the year 1944. We had the great happiness of welcoming our first grandchild, Gary Duncan Campbell. He was born on July 25th, just a few days before his daddy was granted leave to come home after his period of active service in the Pacific, and before being sent to his next assignment.

In July George was transferred to the new war-boom town of Richland, Washington to do war research for the DuPont company. This of course proved later to be work in connection with the Atomic Bomb, but we didn't know it then - thank goodness! He and Betty stopped off to see us and the new baby. George for only a few days, and Betty for a month until enough houses were finished in Richland, so they could have one to live in.

On September 12th, Margaret and our darling little grandson left by train for Ottumwa, Iowa, where Howard was newly stationed. They were allowed to stay there only until December

when he was transferred to an air base at Corpus Christi, Texas. They had bought a Ford sedan, their first car, and stopped off on their way for a short visit in Kansas City with Uncle Norman and Aunt Linnie. A big snowstorm was brewing through the middle west, and Linnie was so afraid they could be caught in it, but luckily they got a few hours head start, and kept ahead of it.

Dad and I being alone again, felt very keenly the void caused when Margaret and little Gary had gone. So we were very happy when we learned that the strict regulations of a war research center like Richland, would allow us to visit there. Accordingly we went to spend Christmas with George and Betty in their roomy duplex, and were greatly intrigued with all the new, unusual and almost unbelievable things we learned about such a town. They were there a little over a year, and when his particular projects were completed, he was transferred to the main research laboratories of the DuPont company in Wilmington, Delaware. Shortly before leaving Richland, he and Betty dashed down by bus to visit us a few days, after which they returned to Richland, checked out and started for Delaware. The DuPont Co. moved them and their belongings, and had found a place for them to move into on their arrival--a second floor apartment at 409 Greenhill Ave. How surprised we all were after the first atomic bomb had been dropped on Japan, to learn in a roundabout way that that was what George had been working on! And the secrecy and urgency of the project were the cause of the repression and preoccupation we thought we noticed in him while we were visiting them.

This same summer, 1945, Margaret, Howard and little Gary returned to Reno. Howard had decided to take his discharge from the Service, now that the war was over, and re-enter the University, hoping to get his degree. They lived with us for a few months until after little Barbara Ellen was born on Jan. 7, 1946. Howard had been working for the Nevada State Highway Department until his discharge was completed and didn't get to enter school until the second semester. When little "Barbie" was six or seven weeks old, they moved into a small apartment across the campus from us.

The A.A.A.S. meeting was to be held on our campus that year in June, and Dad was placed in charge as general chairman, so he was kept busy with local arrangements, committee meetings, etc. throughout the second semester. Harry and Huldah, with Joan and David, drove down for the meetings and stayed with us. One day while they were here, Howard and Margaret took Joan and David up to Tahoe for the day while we older folks were busy with the meetings.

After one semester and two summer sessions of carrying a very heavy schedule of work, Howard decided that with two children to support, it would be too hard a struggle to go on and finish his university course, so in the fall, he decided to re-enter the Service and make it his career. After a brief stay in San Diego, they were moved to Quantico, Virginia, where he was to be stationed at the big Marine Base there. They had bought a used '41 Buick in San Diego, and started to drive across country, stopping for a brief visit in Kansas City. It was winter-time and the trip was proving very hard on Margaret and the children, Barbie being only about a year old. So Howard decided to drive on alone, leaving the others to follow by plane a few days later. They all met in Wilmington where they visited with George and Betty. While there both the children came down with chicken pox. From there they drove on to Midway Island, the little community near the Quantico Base where they were to live.

On Feb. 20, 1947, our first little Sears grandchild was born, and George and Betty named him Harold Frederick. In June Dad and I left by train to make a visit to the two families, our first trip to the Atlantic coast. For some years the University had been holding two summer sessions, and Dad was to teach in the second one. So we had only six weeks for the whole trip, which included a brief visit on the way east in Kansas City, and a briefer one in Indiana to see our old friends, the Creeks. On arriving in the east our first visit was with Margaret and family for two weeks. While there, George and Betty with little Harold, drove over from Wilmington, and in the two cars we all took a trip over the scenic Skyline Drive in Virginia. But it was so foggy we didn't get to see much of the

beautiful scenery spread out along and below the highway. So we abandoned the southern end of the trip and cut across the state for a wonderful day in old Williamsburg. Then Howard and Margaret let us take their car back across the state to Appomattox for a twenty-four hour visit with our old Urbana friends, the Gordons, while they returned home in George's car.

As soon as we had helped celebrate Gary's third birthday on June 25th we went on to Wilmington for two weeks, during which George took us on a brief visit to New York City. While there we attended the light opera "Oklahoma"!, and saw many of the most interesting places in the city, including a panoramic view from the eighty-ninth floor of the Empire State building. On our way back we spent a half-day in Atlantic City, which included a sea food dinner at "Hackney's" famous restaurant right on the beach. A few days later we drove down to Rehoboth Beach for a couple of days on July 4th and 5th. We were joined there by Margaret, Howard, Gary and Barbie, and had the upper floor of a tourist house all to ourselves. Everyone played in the surf but me. I kept watch over baby Harold in his folding buggy. But I did at least dip my feet into the Atlantic.

Before we started home, word had come that Howard was to be transferred to El Toro Base in southern California, so some quick plans were made for Margaret and the two children to accompany us home and stay with us until Howard could find living quarters for them. George and Betty drove us back to Washington, D.C. where we met them and started back to Reno. By early fall, Howard had found a house in Modjeska Canyon, near Orange, though some fifteen or twenty miles from El Toro, but as close as he could find suitable quarters. They were there only six months or so when Howard found that he was due for over-seas duty, and was to be allowed to serve the two-year period on the Ewa Beach Base on Oahu. Margaret was so thrilled to think of spending two years in Hawaii. Howard was sent on ahead as was usually the case, so Margaret, Gary and Barbie came home till their passage could be arranged. She had to drive the car from Modjeska up to San Francisco, all by herself with the two little children, and make all arrangements for

getting it on board ship, and sending it on ahead of her to the Islands. She stayed a day or two with her old chum, Mildred, who was now Mildred Harris, living in San Francisco. Then she and the children took the train on home. It was several weeks before their passage was finally arranged. They were to sail on the U.S.S. General Butner, a large navy ship. On April twelfth (1948) Dad and I drove them all over to San Francisco, and we stayed in the big Marines Memorial Hotel for two days while her papers were being processed. It was quite a wrench to watch them steam out of the bay, but we were happy to know that they were to have the wonderful experience of living in Hawaii.

A few months later we learned that we were to expect two new grandchildren in January--one in Wilmington and one in Hawaii. Marily Jean Sears was born on Jan. 6, 1949, and three weeks later, Jeanne Louise Campbell, on Jan. 27. Grandmother and Granddaddy Campbell went over to Hawaii in February for a few weeks visit, and to help Margaret with the new baby. They could get free passage on a Navy ship. Soon after their arrival, sudden news came that the Ewa Beach Base was being closed, and that Howard would be transferred to a newly reopened base at Edenton, N.C. (Oh, the admirable and economical tactics of the Armed Services!) so the Campbells had to come home on the Lurline (and pay their own passage). And Dad and I, who had already made reservations on the Lurline for the following September, for a visit with the children in Hawaii, had to cancel ours. Margaret got barely one year in the Islands instead of the two she had expected. Because she had a baby under six weeks old, she was permitted to fly home on the big "Flying Boat" the Mars.

They stayed with us from early March until late June, when Dad and I were planning to visit George and Betty again, this time for two months. We got a drawing room on the Overland Limited and all went across country together. In order to have a place to live in Edenton, Margaret and Howard had to buy a new house which was not yet finished, so they stayed with George and Betty also for a few weeks. Was that a houseful!

Ten of us and two or three times on week-ends when Howard would fly up from Edenton, eleven. George and Betty had bought a fairly large two-story house on 2.87 acres of ground about two miles outside of Wilmington, that spring. The land consisted of meadow and orchard beyond the large lawn around the house, and was just across the road from a lovely patch of woods. Although cooler than their apartment had been, it was still quite warm during the summer months--a sticky heat so different from our dry Nevada heat. After Margaret's family had moved on down to their new home, George and Betty took us on some lovely trips to points of historic interest, among them Philadelphia, Valley Forge, and Gettysburg. In August, we persuaded them to take a ten-day vacation trip up into New England while we took care of little Harold and baby Marilyn. Off and on during the summer, Dad helped George build a study in the basement, also remodel and lay hardwood floors in the living and dining rooms.

After leaving Wilmington, we spent two or three weeks with Margaret's family in their new home in Edenton. Soon after we had returned home, we learned that the Marine Corps was talking of closing up the newly reopened Edenton Base, and before many months they actually did. We have often been aghast at the wasteful tactics of the Military Service, and that was one of the times. So it was "leave the now useless new home and move on." They were transferred to Cherry Point, N.C. only they had to live in Morehead City, some twenty miles away, in an old barn of a house for some months until there was an opening for them in the spring (1950) on the Cherry Point Base in a nice large apartment house.

DAD RETIRES FROM ACTIVE TEACHING

At the close of the school year, June 1949, Dad now almost seventy-one, was retired from active teaching at the University. Along with Professor V.E. Scott and comptroller Gorman, also being retired, he was honored with special ceremony from the platform where all three had seats of honor on Commencement Day, and were welcomed into the ranks of the

Emeriti. Again at the Commencement luncheon they were called upon for speeches and presented with small bronze replicas of the famous Mackay Statue on the campus. The Student Chemistry Club, at its last meeting of the year, had presented him with a nice "Parker 51" desk set. He was also given an office-laboratory in Mackay Science Hall for any further work he might wish to do, and for the next few years he was kept quite busy with research problems he had not yet completed. I think he was just as busy as when he was teaching, but was also enjoying the freedom to go and come as he pleased. Of this work he will tell in his part of our story (Book II).

In the fall of 1949, he received an invitation to teach chemistry, during the spring term in a small leadership-training school at Deep Springs, California. As a part of his duty was the taking of our meals in the dining-hall with the boys, I had no cooking, dishwashing or marketing to do. This was just the opportunity I needed for finishing two projects and starting another. I classified and pasted into three albums, an eight-year accumulation of snapshots, practically finished for Margaret a crocheted tablecloth on which I had been working sporadically for some years, and I began this story and got it about half done. Dad had a bright group of boys in his chemistry class and thoroughly enjoyed the intensive course he was giving them. It was a very pleasant experience for both of us.

On our return home in June, we started immediately upon the building of our new home on Alta St. which would stand just west of our Hillside Drive house. Dad acted as general contractor, letting the sub-contracts himself. We had worked out the plans before going to Deep Springs, and had employed a young architect, Frederick Perazzo (a boyhood friend of George's), to draw up specifications, see that it was structurally correct, and advise concerning reliable carpenters and sub-contractors. We moved into it on Dec. 21, 1950, just six months from the time we broke ground.

In the fall of 1951, I was sent as a delegate to the biennial Supreme Convention of the P.E.O. Sisterhood at Philadelphia, representing five of our Nevada chapters. It was a very inspiring experience to me. Dad accompanied me as far as Wilmington, where we visited with George and family for nearly a month prior to the time of the convention, when I went up to Philadelphia alone. While in Wilmington, Dad helped George build an outdoor barbecue and patio which they greatly enjoyed during their hot summers. Following the convention and our visit with George and family, we spent a month on the Cherry Point Base with Margaret and her three children. Howard was out on Maneuvers in the Caribbean area, so we didn't get to see him at all.

On our return trip home, we made a short visit in Pineville, N.C. with Harry's daughter, Elizabeth Sears Hall and her family. Then on to New Orleans for a day and a half with old University of Nevada associates, the MacKenzies, who did a wonderful job of showing us the city, and especially the old French Quarter where one of the highlights was dinner at "Antoine's." Our next stop was with Dean's family in Torrance, Calif. for a few days, then on up to Palo Alto for a short visit with Jess and Stella. While there we all had Thanksgiving dinner with Norman and Tysie and their boys. Our last stop was with Clara in Oakland, and we arrived home on the 30th of November, a long (three months) but very enjoyable trip. Fred and Myrtle were at the train to meet us. The next day I had to begin giving my reports of the P.E.O. convention to the five chapters I had represented-- a small price to pay for a great privilege.

In October, while we were away, Madge and Lyman sold their home here in Reno and moved to Corvallis, Oregon. How we hated to see them leave! But Lyman had received a more desirable position with Oregon State College, and on being allowed to take his retirement early from the Nevada Veterinary Control Service, could accept this new offer.

The following January, 1952, Margaret and the three children returned to Reno to stay with us while Howard, for some

time now a captain, was sent over to Korea for a six-months "tour of duty," where our troops were trying to check the advance of the Communists in North Korea. Their furniture was being stored by the Marine Corps, as he would be re-assigned to another base upon his return. They arrived just after a terrific snowstorm, which had caused their train to be held in Ogden for twenty-four hours, and had also caused the "Streamliner" that preceded them to be marooned in the high Sierras for three days. Gary and Barbie entered the Orvis Ring School at once, the same school their mother had attended many years before. Margaret Sampson, our Margaret's former piano teacher, insisted on giving Gary free music lessons, while her sister Ruth Ryan gave Barbie ballet lessons in her dancing school. Both of the children appeared in the spring recitals.

Life was going on busily and happily when the tragic news came, about the middle of June that Howard had been killed while on a bombing mission over North Korea. A new type of detonating device had been installed in their bombs that very morning, against the wishes of the ordnance supervisor of the squadron of which Howard was captain. Suddenly, before they had even reached enemy territory, the bombs his plane was carrying exploded, sending him down in a flaming crash. This was on June 14th, and although his body was recovered that same day, it wasn't until late in August that it finally arrived in Reno for the funeral and burial. Margaret Sampson's husband, Major Gordon Sampson, took full charge of the military funeral, and indeed they and Ruth Ryan practically adopted our little family and were constantly doing nice things for them. What wonderful friends they were, and still are after all these years!

It now seemed best that Margaret should have a home of her own, so after a few weeks of house-hunting, a very nice three-bedroom brick house was found on Hillside Drive, just a block and a half north of us, which she bought with her insurance money. She sent for her furniture and moved in about the end of August. When school opened in the fall, she began taking a few courses in

the University so as to be able to renew her teacher's certificate, intending to begin teaching in another year or two when Jeannie should have started in first grade.

It seemed to have been decreed otherwise though, for about a year after Howard's death, she met a very fine young man, Douglas Pope, at some of the church meetings and parties, and soon they began going together. He had come to Reno as head of the boys' work program of the Y.M.C.A. Both he and Margaret were active in the work of the Sunday School and church.

In early August of that summer, 1953, George and Betty, with Harold and little Marilyn drove across country to make us a visit. What good times we all had together--trips to Pyramid Lake and to Tahoe where our cottage was again crowded to the limit! We were so happy that George and Doug got to meet each other and get acquainted, for it soon began to seem that the friendship between Margaret and Doug was becoming a much deeper attachment. When we found that they were planning to get married, we were so thankful that Margaret was to have another chance for happiness. The Campbells too, who had moved to Reno after the children were settled here to live, were happy over the way things were turning out, for they realized that their lively grandchildren needed a father, and they too were fond of Doug.

The wedding took place on Sunday afternoon, March 21st, 1954, and again it was a lovely church wedding though with only relatives and a few close friends attending. Our esteemed friend and pastor Arthur Thurman performed the ceremony; and immediately afterwards we had a reception for them at our home with about fifty or sixty guests present. While they went on their honeymoon to Yosemite State Park and to Southern California, Dad and I went over to their house and stayed with the three children and their Collie dog, Muffy. Soon after their return home Doug accepted a position as a design engineer with North American Aircraft Corporation at Downey, California and found a house for them to live in, in nearby Whittier.

After about two years of enduring the unwholesome smog of that locality, Doug obtained a position with Beech Aircraft Corporation in Boulder, Colorado, where they built a lovely and commodious house and began enjoying the fine living conditions of a healthful mountain climate.

Meanwhile things were going along harmoniously for George and Betty in Wilmington. George had received several raises in salary, and a promotion in rank to that of Research Scientist with the duPont Company.

Before ending my story I want to record that we were made very happy in May of 1955 by the addition of two more grandchildren to our family. Carol Marie Sears was born on May 17th in Wilmington, and just one week later, on May 24th Doug and Margaret welcomed little David Douglas Pope into their home in Whittier. This was about a year before they moved to Boulder.

And now, dear children, I must bring my story to a close. You will be much better able than I to put the proper evaluation and interpretation upon the events of the last few years. My hope and prayer for you both, and for all your dear ones, is that life may bring to all of you as much happiness, as deeply satisfying work, and as great fulfilment of your hopes and ideals, as it has brought to your Dad and me.

Lovingly, Your Mother,

Edith F. Sears

BOOK TWO

GEORGE WALLACE SEARS

The Story of My Life and Work

In a Changing America

An Autobiographical Sketch

The Story of My Life and Work in A Changing America

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C. B. Sewell
9/16/13

PART I

INFLUENCES SURROUNDING MY YEARS

ON THE FARM

Was it the easy going community into which I was born and the large family of which I was a part, with its scarcity of money for extra things, that made me willing to repeat year after year the reading, writing and arithmetic in our one-teacher ungraded Wooderson school, until I was almost twenty years of age? Or was it the frequent visits of Professor Shaw, Principal of Kidder Institute, explaining to my older brothers the advantages of further education; or the quiet ambition appearing always to radiate from my father and mother, that their children would develop the strength of character and the desire for education that would enable them to rise above their surroundings and cope with the problems ahead of them, that caused me rather to become discontented with the slow progress I was making and unwilling to continue it?

As I look back upon these years, I am convinced that each of these influences must have been at work. Throughout my boyhood years, my neighborhood playmates were for the most part younger than myself. This fact may have tended to retard my development or to cause me to think of myself as younger than I really was. I cannot remember that I ever disliked school or that I wanted to quit going, until one day toward the end of the school year at Wooderson, when I seemed suddenly to realize that I was not advancing in my studies but only marking time. I do not believe that I was concerned then that I would be twenty years old that summer

but only that I was bored with the kind of instruction I was getting and didn't see any advantage of continuing with it any longer. When I arrived home from school that evening, I told Mother I wasn't getting anything out of my school work and didn't see any use of going there any more. In order that the reader may understand the significance of this general attitude and how it served as a guide to my future career, it will be necessary for me to go back and tell of the various influences that surrounded my early life on the farm.

FATHER AND MOTHER

Many years before I was born, my father, William Wallace Sears, then a young man about twenty years old, left his home near Ogdensburg, New York, and spent twelve years traveling and working through much of the West and Pacific Northwest. His work there was quite varied in character, as was to be expected in a new and sparsely settled country. He experienced much satisfaction in it, though disappointments were by no means absent. He had learned much of life through those experiences.

It was in October 1856, about four years after his older brother Chauncy had gone West, that he and two other young men of the neighborhood, Charley Horsford and Fred Smith, left their farm homes near the little town of Madrid, boarded a steamer at Ogdensburg and proceeded through the Great Lakes to Chicago. From that city they went by train to Rock Island, Illinois, then a center of the lumber industry.

They remained in this general region, working at various occupations mostly in connection with the lumber industry, for about two years when the fever for travel again overtook them. They purchased a small boat at Clayton, Iowa, a little town on the Mississippi River, and rowed down the river to Dubuque. Here they engaged a hotel room, took stock of their assets and found their combined wealth amounted to just one dollar. They

were somewhat disturbed by this showing, for times were hard and work was scarce. They did not give up however but went out to find work. After much searching without success and when the landlord was beginning to question their ability to pay, good fortune sent them aid in the person of John Sexton, a home-town friend. The boys told him of their plight and he very generously went to the hotel keeper and promised to stand good for their expenses. With this encouragement they went out again with renewed vigor and were soon rewarded with employment. Sears obtained work in a soap and candle factory at fourteen dollars per month. He remained with this work until the following spring (1859) when he and Smith decided to go on west. This was the year in which the great gold rush to Colorado began. Placer gold in paying quantities had been discovered the previous year by a man named Russell in Little Dry Creek, near what is now Denver. The big rush, however, followed the news of two other strikes in the Idaho Springs--Central City district in the early spring of 1859. The first, by a man named Jackson, was nugget and dust gold similar to that of Russell's; the second, by a man named Gregory was lode or vein gold, held in solid rock underground. Sears and Smith, therefore, became a part of that trek to the gold fields. Horsford, apparently not wanting to venture further west, decided to return home. It may be of interest to note that he later married Sears' sister Ellen and became the father of our cousins, Jesse, Fred and Jennie Horsford.

Having purchased a team of horses and a buggy, Sears and Smith started out for Pike's Peak, the mecca of gold seekers in Colorado. Their journey led them across Iowa to Omaha, thence across Nebraska, a vast plain containing only a few white men, various bands of roving Indians and great herds of buffalo. Having crossed Nebraska, they went into the mountains near Denver, reaching the gold fields about mid-summer.

They had traded their team of horses and buggy for a yoke of oxen and a wagon before reaching Omaha, had encountered two bands of Indians and a herd of buffalo in Nebraska, had met several small groups of men going to, as well as coming away from the

gold fields, and had experienced some hardships, disappointments and lack of food as well as moments of uneasiness over the safety of their scalps. They had put up at a farm house one cold night without knowledge of the owner who didn't come home that night. They had frightened some much desired buffalo meat one day when Sears suddenly found himself crawling into the fangs of a big timber rattlesnake while trying to get within gunshot of the buffalo. They had been so short of food that Sears, having been without food for two days, could go no farther and was forced to sit by the roadside while his partner went on to find help.

Undaunted by these things, however, they finally reached the gold fields and took up their first claims near what is now Boulder, Colorado. This was in the summer of 1859. Unfortunately, however, these claims produced only float gold that needed quicksilver for its recovery. This they were unable to get so they sold their claims and prepared to go farther on.

It was at this point that the two boys, Fred Smith and Wallace Sears, who had started out from home together nearly three years before, separated, Smith leaving directly for California. Soon after this parting Sears became ill, was confined to his bed for several days and unable to work for some weeks. When he had completely recovered and was able to work again, he left the two companions who had been with him during the summer, and went over to Mountain City where he obtained work in a quartz mill. This was in late summer, 1859. He remained with this job about two years.

In the mining fields, then as always, new rich strikes were difficult to resist and the average miner was often attracted from one place to another by such news. These boys seemed to have been no great exception to that rule. At any rate, while working with pick and shovel in the Saw Tooth mountains near what is now Idaho City, some three years after their separation at Boulder, Colorado, Sears recognized his old friend Fred Smith working at some distance away in the same gulch. This was during the summer

of 1864. He was not long in making himself known and they soon became partners again. This partnership, however, was not in mining but in a contract to haul logs to a sawmill at seven dollars per thousand feet of lumber.

Sears, at least, found this new type of work so much more satisfactory and profitable that he never returned to mining but, in the spring of 1865, he bought a yoke of oxen and a wagon and started hauling freight from Umatilla City on the Washington side of the Columbia River to Idaho City and Boise City, a distance of about three hundred miles, requiring about six weeks to make the round trip. This work proved so successful during that summer that he bought four more yoke of oxen and a five ton capacity wagon in the fall and continued in this business for nearly four years. His freight consisted largely of miners' supplies and provisions. The work was hard and the stage road was infested with outlaws and robbers. He was always alone and often had considerable gold dust, the usual medium of exchange between miners. On one occasion when he was on a return trip to Umatilla City with about six hundred dollars in gold dust, he was overtaken by a suspicious looking traveler who seemed inclined to stay along with him, and after a short time, expressed his intention of riding. Sears was walking along by his oxen when this fellow began to make himself comfortable on the back end of the wagon tongue, the only place provided on these big freight wagons for a man to ride. This was too much for Sears, and with his big rawhide whip in his hand, he ordered the fellow off the wagon. The fellow refused at first, but when he saw the big whip being raised to strike, he changed his mind, got off and started back toward Idaho City. In the fall of 1868, Sears decided to give up his business, dispose of his interests and return home to New York.

In his various wanderings, he had corresponded with his parents and with other members of his family, had received a letter from his brother Chauncy, down in Sacramento County, California and had written asking that Chauncy come north and join him in Idaho. Instead of an answer from Chauncy, however, he received a letter from Chauncy's business partner, telling him that Chauncy and another man of their party had gone out with

some apparently friendly Indians who had promised, in exchange for a pair of red blankets, to show them where they might find gold. That night the two men left at camp were attacked by the Indians. Chauncy and his partner were never seen nor heard of again. It was assumed they had been killed by the Indians.

Whether or not it was thoughts of his brother or the hard and lonesome work he was doing, or just a desire to see his old home and own folks again, I do not know. At any rate, he boarded a steamer at Umatilla, in October 1868 and set out down the Columbia River for home. Stopping for the night at Portland, Oregon, the next day he embarked on an ocean steamer for San Francisco. During this trip he became very sea sick and lay in his bunk most of the way, telling himself if he should ever live to get off this boat he would never get on another. The boat, however, was to lay over in San Francisco for eight days. He soon recovered from his sea sickness, had his gold dust coined at the San Francisco mint and was ready to go on with the boat when it steamed out of the harbor. He had no further sea sickness and enjoyed the remainder of the trip down the Pacific to Panama, across the Isthmus and up the Atlantic to New York City.

He remained at home, however, less than a year when he decided to return West. As he was traveling by train through the northern part of Missouri, he chanced to pick up a newspaper someone had left on a seat in the car in which he was riding. The first item that attracted his attention was a glowing account of a New England colony at Kidder, a small town in the northwest part of the state. It was a beautiful day in the spring of 1869, and from the car window the country looked good. He decided to stop off and investigate the farm land. He found a piece to his liking some four miles northeast of the town, eighty acres of which he purchased at ten dollars an acre. On this he built a small house and at once began to prepare his land for farming and to make himself a part of the community. It was in this same small house that I was born some nine years later on July 9, 1878, the fourth child and fourth son in a family of eight children.

My mother was born Angeline Augusta Johnson on September 22, 1846, in Buffalo, New York, the daughter of Henry Woodruff, and Laura Hall Johnson. Her father, a Vermont volunteer in the War of 1812, was then a Buffalo merchant with six children left to him by the death of his former wife. Angie was therefore born into a family of children considerably older than herself. Probably because of this, her childhood years were quite free of any responsibility. At the age of thirteen, however, her father died and left her alone with her mother. They were thus thrown largely upon their own resources for their support. For some years they lived with the family of Angie's aunt Salome Scoville, her mother's younger sister. Salome's daughter Clara (called Caddie) was just four years younger than Angie, and the two girls soon became like sisters to each other, a relationship they maintained throughout their lives, even though they lived as adults in very different surroundings and in widely different parts of the Country.

Many years after their girlhood together, Cousin Caddie as we called her, in telling of those years, said of Mother: "She was always happy when taking care of children and they all loved her." It was through this love of children that she had been able to help her mother with their living expenses and doubtless this had much to do with the character of her influence in shaping the lives of her own children.

In 1867, some seven years after her father's death, Angie and her mother left Buffalo and went to live with a cousin of Angie's on a farm some eight miles northwest of Hamilton, Missouri. This new home was also to lead to a new kind of life for Angie. She was not long in getting acquainted with her new surroundings and entering into the new life. She was soon going about the country on horseback, sometimes using a saddle but often only a sheepskin strapped to her horse's back.

She and her mother had been living there about two years when a neighbor of theirs, while working for a young Easterner who had recently purchased a farm some five miles from their place, told this young Easterner of the pretty young lady living near his home. Of course this brought remarks from the young Easterner, some of

which were reported to Angie by the neighbor. Girl-like, she answered them. She had not met the young man but had seen him several times in passing his farm on her way to Kidder. This type of communication had been going on for some time when one day he sent word that he would be happy if she could send him a book to read. Angie's quick reply was, "You tell him if he wants a book to read to come and get it." Of course the book was gotten and from the friendship that developed, there resulted in due course the wedding of William Wallace Sears and Angeline Augusta Johnson on December 19, 1871.

Following the wedding, they made the trip together in the farm wagon to the little house he had recently built. Thus in four years my mother had made the change from her life as a city-bred girl to a midwestern farmer's wife, which in those days meant hard work with few conveniences as we think of that word today. Yet throughout the years that followed, she never seemed to have regretted the change but was ever loyal to her family and ever ready for any sacrifices that she felt would lead her children into a less arduous and more serviceable life.

THE FARM

As their children began to come along, so far all boys, Father's original eighty acres of land must have seemed inadequate for keeping those boys sufficiently occupied while they were growing up. At any rate by the time I was born, the farm consisted of 120 acres, an 80 acre rectangular tract extending one-half mile to the south of an east-west road, and a square 40 acre pasture adjoining this on the west and also bordering the road. The house and other farm buildings were located on the northwest corner of the 80 acre tract facing the road.

The general topography in that part of the state consisted of rolling prairie land, dotted here and there with patches of timber. In many of the small valleys through the region, deep ditches had been cut by the rush of water along their courses during heavy rains. Generally, however, they were dry. One

of these ditches crossed the road a short distance west of our house and ran through the 40 acre pasture. Some distance down the pasture where the land was more level, the ditch was quite shallow and largely filled with sand. It was in one of these clean sand deposits that my brother Jesse and I, either alone or with some of the neighboring boys, spent many happy hours during our early childhood, constructing farms and stocking them with horses, cattle and hogs that we made from small pieces of dry corn stalks.

Most of the farmers in our general neighborhood owned their farms. As a general rule, these farms consisted of 40 to 160 acres. The soil was good and in most cases was kept so by use of barnyard manure and the rotation of crops. While corn was the chief income crop, most of the farms had a garden plot, an orchard and small acreages on which they grew various small-grain crops such as wheat, oats and occasionally rye or buckwheat. These crops were utilized chiefly as feed for stock or ground into flour for family use, at one of the small flour mills existing at that time in many of the small towns round about.

From the apple orchard, it was quite generally the custom to utilize the smaller apples for making cider and vinegar. For a good many years, there was a cider mill within three or four miles of our place, to which we would take our smaller apples to be made into cider. These small mills were generally operated on a share basis. Father would often bring home a twenty gallon keg full of fresh cider, which was used as such for the few days it remained sweet, the remainder being allowed to ferment for the production of vinegar. Similarly a small patch of cane was planted each year for making into molasses. This was done in other small local mills by pressing the juice from the green cane stalks and evaporating it in large pans to a thick sweet syrup.

In our front yard with its large spreading maple trees and their inviting shade from the hot summer sun, there was also a row of large cherry trees along the fence separating our house from the woodpile and other farm buildings. From those cherry trees, we

boys would pick and pit each year literally wash tubs of large black sour cherries which Mother would can for winter use. The cherry pies, coming from those trees, I still often think of as among the outstanding high spots of my childhood years.

All of the nearby towns were small, Kidder with a population of not more than two or three hundred and situated about four miles southwest of our home, was the nearest. However, we did most of our trading at Hamilton, a somewhat larger town seven miles to the southeast of our home. Both of these towns were located on what was then known as the Hannibal and St. Joe railroad. I can well remember seeing Father take a sack of wheat or shelled corn and occasionally buckwheat to Hamilton and bring back his share of the flour, bran and meal, obtained from grinding them at the small flour mill located there. Gallatin, our county seat, was twelve miles from our home and was seldom visited by our family. Our community, therefore, with its relatively small but diversified farms, its large families and its small towns to serve the community, was largely self-sufficient and seemed to have little need of outside contacts.

SCHOOL AND COMMUNITY LIFE

The public school was situated a mile from our house, to and from which its forty or so pupils walked each day. Being of the one-teacher type, which seldom succeeded in retaining the same teacher for longer than one or two years, progress was inevitably slow but I believe instruction was quite thorough. Teachers were probably average, though I can remember a few that I thought were outstanding. My first teacher, Miss Josephine Mitchel, I still remember as a pleasant young lady of medium stature and particularly attractive to me at six years of age. I think I must have gotten a very favorable impression of school life from her and a good start in my school work, since I remember her as one of my very best teachers. I do remember, however, the Chubbuck brothers, Charley and Ed, as being good teachers and also my older brother Norman who taught one term toward the end of my years at Wooderson.

The school building was of the usual wood construction, rectangular in shape and having an entrance hall extending the full width of the building. Hooks along the walls of this hall provided places for hanging the pupils hats and coats. Entrance to the main school room was through doors at either end of the hall partition. This room was lighted by means of windows along each side of the building and heated by a long round-bellied wood stove located near the middle of the room. At the front end of the room and between the two entrance doors, there was a platform, raised about six inches above the floor and extending out into the room some seven or eight feet. The teacher's desk occupied the front middle portion of the platform, and a blackboard was located along the partition wall at its back. Blackboards were also placed along the whole length of the back wall of the room and on the side walls between the two front windows. Seating was at desks, accomodating two pupils each, arranged in rows from back to front so that all pupils faced toward the front end of the room. As a rule the older pupils occupied desks in the rear and the younger pupils were seated toward the front; girls on one side of the room and boys on the other. For recitation, classes were brought together on the front seats.

The school day began at 9:00 A.M. and ended at 4:00 P.M. An hour was given at noon for lunch and recreation in addition to the usual fifteen minute morning and afternoon recess periods. Thus the school day was divided, as at present, into four sessions the first session being devoted chiefly to the different classes in reading, the second to arithmetic, the third to grammar, history and writing and the fourth to geography and spelling. We used as reading texts the long-famous McGuffey readers, of which we used five different texts, known as First Reader, Second Reader, etc. The First and Second Reader classes usually recited four times each day, the first of the morning classes and immediately following the morning, noon and afternoon recess periods. The Third and Fourth Reader classes would recite twice, first in the morning and again following the noon recess period. Most other classes recited only once each day. Each pupil, therefore, would have at least one class period during each of the four daily sessions.

I cannot recall that I ever disliked any of my studies, although I did enjoy arithmetic, grammar and geography most. In these subjects, I could find more tangible aids to tie the subject matter together. I have never forgotten, however, the difficulty I had in learning the multiplication table. It seemed to give no clues with which I could relate the combination of numbers to each other. There being no public high schools in that general region, it was not at all unusual for many pupils to continue here until well along in their teen-age years, since for them it usually meant the end of formal education.

Our playground at Wooderson school was quite large, but entirely devoid of athletic devices of any kind. However, this did not prevent us from enjoying to the full the various games in vogue at the time. Practically all the pupils brought their lunches to school. The noon hour, therefore, provided time for baseball, black man, dare base and marbles, each of which was played with enthusiasm at various times. When I was in school at Wooderson, the more popular type of baseball was what we called "Roundy." It provided considerable flexibility both in the number of players and in the time they could enter the game. It also provided for the rotation of positions in the game so that each player could advance himself toward the coveted position of batter by the use of his own skill, judgment and cooperative spirit in putting the batter out. The religious life of the community was built around two Protestant churches: a Methodist church, situated about three quarters of a mile east and north of our house, and a Baptist church, located about a mile and a quarter west and north. Much of the social life of the community resulted from activities carried on by these two churches. Father and Mother had joined the Methodist church and regularly attended services there. We children also went there to Sunday School. As we grew older and began to go out alone at night we often attended the Sunday evening service at the Baptist church. We, therefore, not only became familiar with both of these denominations but entered into the social life of both.

Although both Father and Mother had come to Missouri from their former homes in New York state, cross country travel was infrequent when I was growing up on the farm. For the most part, our family relatives remained in the East and we children came to know them largely through their correspondence and from hearing Father and Mother tell about them. As a child I seemed to know Mother's cousin and life-long chum "Cousin Caddie" best. One reason for this was that she remembered us so often at Christmas time with presents. One of these presents, a picture scrap book that she made while working in a book bindery, I still have and prize highly. I never saw her, however, until I had left the farm and was living in my own home at the University of Illinois, when she stopped off for a short while on her way home from a visit with Mother and Father during the summer of 1916. When I was eleven years old, Mother's oldest half sister, Aunt Fannie and her daughter Jeanette, came to our house for a visit. And a few years later, I think it was, Father's niece, Uncle Andrew's daughter Bessie and her husband P. J. Loftus, made us a visit on the farm. Other than those, I had seen none and knew little of my relatives outside of our own immediate family.

It may be of interest to note in this connection that although all of us were born on the farm, and lived the early part of our lives there, only Bertha continued farm life as an adult. She was married to a neighboring farmer boy, William Stephens, bore him two sons, Harold and Leland, and died in 1930. Clara the younger daughter taught in the public schools of Missouri and California for a time, until her marriage to Charles McCullough, a San Francisco business man. All of the six boys left the farm for various professions. Charley became an accountant, a profession he has followed continuously through the years. Norman, following a short period of public school teaching, became secretary of a small life insurance company. This was later absorbed by the Kansas City Life Insurance Company which he also joined and of which he later became secretary, a position he held until his retirement in 1943 because of ill health. He died in 1950. Dean, the youngest of the boys, following a varied and colorful early life in

California, joined the Bank of America as manager of a small branch. Promotion soon came to a larger branch in a more populous city where he remained until his retirement a short while ago. The remaining three, Jess. Harry and myself, following our years of preparation joined the faculties of various institutions of higher learning; Jesse in the field of Education at Stanford University, Harry in the field of Bacteriology at Oregon Medical School, and I ? Well, that is the subject of this story.

THE FAMILY CIRCLE

Within the family circle there was never a dull moment. Having three older brothers, I had the advantage of their experience and must have learned many things from them. There were also four children younger than I, two sisters and two brothers. One of my earliest duties was to look out for these younger children while at play or when Mother was otherwise occupied. As children on the farm we spent a great deal of time with each other, a relationship we have cherished and maintained as much as possible ever since. Perhaps the following list of our given names, including familiar name and birth date will be helpful in understanding this relationship.

Charles Benton (Charley) Nov. 8, 1872
Clarence Norman (Normy) Aug. 15, 1874
Jesse Brundage (Jess) Sept. 25, 1876
George Wallace (Wallie, Dick) July 9, 1878
Bertha Laura (Bertha) Jan. 6, 1880
Harry Johnson (Harry) Feb. 13, 1885
Clara Geneva (Clara) July 5, 1887
Dean Leslie (Dean) May 5, 1894

Even at a very early age, my three older brothers, quick to see and make ridiculous comparisons, began to nickname me "Dick" because of a resemblance which only they could see, between my full round cheeks and the heavy jowls of Father's big black Poland

China hog which went by that name. Even now I am familiarly known among them by that nickname. This ridiculous comparison of my older brothers, however, was not the only contact I was to have with the hog family. I had hardly reached the age of six or seven when I went out one day with Jess to put corn into the feed boxes for the horses. We climbed into the corn crib, filled our arms with big ears of corn and started for the barn. Following just behind Jess, I jumped out of the crib near which an old sow with her pigs was picking up any kernels of corn that might have dropped. I had no sooner touched the ground than a pig began to squeal. Immediately its mother dashed upon me, knocked me down and might easily have killed me, had not Jess succeeded in getting hold of a short club with which he beat her off. Even so, I received deep cuts from her teeth as she clamped them into my arm, and in my leg where she left a tooth. I still wear the scars of that encounter.

As children around the home, we had very few toys ready made for us, nor did we have at school the already prepared athletic devices so prevalent on the school grounds of today. There were but few ready made toys to be had and but little money in the household that could be spared for such luxuries. We were, therefore, left pretty much to our own devices for our amusements both at home and on the school ground.

I cannot remember that I ever had, during my early boyhood, any plaything that I prized more highly and lost more frequently than my father's hatchet. When playing outside, I would often get the hatchet, carry it around with me, lay it down and forget where I left it. Many times did my mother leave her work and go with me to hunt the hatchet, thus saving me from the punishment that was sure to follow when Father came in from the field. Father had little patience with that sort of irresponsibility, but Mother, remembering perhaps her own care-free childhood in Buffalo, sympathized with her young son and was always ready to help him through the difficulties that seemed so much a part of his growing up.

At home we children associated largely with each other and played a great deal together. Especially was this true of my sister

Bertha and myself. She was only about a year and a half younger than I and some five years older than Harry, the next younger child. She had a large doll of which she was very fond. It had jet black hair, large bright eyes and was so intelligent looking that I had often wondered what was in its head behind those sparkling eyes. This very wonderment soon got me into trouble. One day when I was out in the yard alone with the precious hatchet of Father's, I came upon the doll where Bertha had left it for a time, and as I saw it the idea struck me to find out what was in its head. I picked up the doll, carried it out to the front of the house, placed its head on the stone step and raised the hatchet for a death blow. There was no Pocahontas present to throw herself on its neck, so the hatchet fell with a determined blow and the head fell into pieces. Of course there was nothing in it, but I had satisfied my curiosity. It didn't take me long, however, to see that the satisfaction foreboded ill to me and immediately I disappeared from that scene. I succeeded only in putting off the evil hour, but it came and I became a wiser boy therefor.

X Another incident of an even more serious nature, involving the hatchet came one day when Bertha and I were playing out in the woodyard and I of course had the hatchet. While she was holding a little board on a log, I was wielding the hatchet in an effort to split it. Before I had succeeded, however, I struck a heavy blow which missed the board but not Bertha's finger, the end of which was left hanging by a mere thread of skin. We both rushed into the house to Mother, who replaced the severed part and bound it up. Except for a bit of finger nail that grew out of line, the finger healed with practically no disfiguration.

As a youth, however, I was not always destructive, nor was I always with nothing to do but play. We children were each given some little chore to do and were held pretty rigorously to its accomplishment. For a long time it was my duty to see that the woodbox was filled each night and that kindling was made ready for the next morning's fire in the cook stove. Sometimes this became quite irksome to me and occasionally it was forgotten. I remember quite well one night after dark, Father discovered the wood

box empty and no kindling. I was immediately informed of the fact. I pleaded with Jess to go out with me and chop the kindling but to no avail. I went out alone but not very willingly for I was then quite timid in the dark. I had just begun to split the kindling when crash went the ax into the end of my big toe, splitting it down the middle of my toe nail. For the next month or two Jess did assume responsibility for my chore, while I tried almost in vain, it seemed to me, to keep my toe from throbbing. In all of these difficulties and probably many more that I do not now remember, I could always go to Mother for sympathy and consolation.

When I was perhaps eight years old, Father purchased an additional forty acre tract of wooded pasture land, situated a half mile west of our house. From this tract was obtained our winter's supply of fuel, white oak posts for the construction of fences and summer pasture for the cattle. Through one corner of this "other pasture" as it was called, flowed "Marobone" creek where we boys often went fishing and swimming during the summer, and skating during the winter. It was in this "other pasture" also that we would go each fall, after the first heavy frost, for hickory nuts and black walnuts, usually found there in abundance. We were always ready to gather and hull these nuts in anticipation of the pleasure of cracking and eating them during the long winter evenings that were to follow.

As I look back upon those winter evenings, I'm sure they must have been quite fully occupied. There was usually some school work requiring home study, checkers and other table games we often played and the frequent visit of neighbors, especially Mr. and Mrs. Amos (Shop) Harpster, who would often drop in for an evening's chat with Father and Mother. I was especially interested in these visits for they usually meant an evening of fascinating stories of Father's early life and adventures in the West. After the usual greetings and general remarks on the weather and their farm doings, Father and "Shop" would sit by the fire and exchange stories of the West. There was the one about the big "buck Indian" who came into camp one morning, threw his blanket over a stump and sat down on it, without so much as "by your leave" or a "good morning." They in turn went about breaking camp and getting ready for another day's journey across the plains. When at last they had gathered all their belongings into their wagon and

hitched up their oxen, they drove off leaving the Indian still sitting on the stump. Looking back occasionally as they drove along, they could still see the Indian sitting there until they were entirely out of sight of the place. However, when they stopped for their noonday meal, they were suddenly reminded of the Indian sitting back there on the stump for when they found they had failed to pick up their camp kettle that morning, it dawned upon them that it had been the stump on which the Indian had sat so long.

Another story concerned an incident that must have occurred during the time he was freighting between Umatilla City and Boise, Idaho. One morning after delivering his freight and receiving payment in gold dust amounting to some six or seven hundred dollars, he decided to take the day off and see the city. Thinking his gold dust would be safer with his wagon than on his person, he put it in a baking powder can and buried it in the ground under his wagon. On his return that evening, he found his wagon had been moved and deep ruts where his wagon had been, gave evidence that there had been a great deal of travel over that ground during the day. His first thought of course was for his gold dust and he began immediately to search the ground where he thought he had buried it. After considerable search and moving about of much dirt with his heavy boots, he finally came in contact with the baking powder can which, on opening, showed his bag of gold dust just as he had left it.

WORK ON THE FARM

As time went on and I grew older, the amount of work required of me increased from year to year. There was the garden to be weeded, the cows brought from the pasture and the milking to be done. These things I was expected to do after school, in the evening and on Saturdays. During the summer, there was the ever present job of cutting the sprouts off the green stumps that were left after cutting down the timber in the "other pasture" for the winter's supply of fuel, for fence posts, etc. These sprouts, if allowed to grow up around the stumps, would soon form a dense

thicket and crowd out the grass, thus reducing the value of the land as pasture. In the fall there was the winter's wood to be sawed and split for the stoves, and the corn to be gathered from the field.

When I first began helping with the corn, my job was to gather up the corn from the "down row," that row of corn straddled by the wagon as it was being drawn through the field, while an older brother on each side of the wagon was gathering the corn from two standing rows. In this way three of us could work with a single team and wagon and shuck about fifty bushels of corn per day. This was not only tiresome work but was hard on the hands, since the dry husks tended to cut through the skin, leaving it rough and often sore.

Of all the jobs on the farm, however, those of hay making, grain harvest and threshing were perhaps the most arduous and exacting of farm work. These were usually hot weather jobs and required the efforts of several men working together. While there was usually sufficient help in our own family to cut and put up the hay, Father regularly hired the wheat and oats cut by someone owning a binder, and the grain threshed by a threshing machine brought into the neighborhood each year for that purpose. These machines had been on the market for some years but were not generally owned by the farmers in the community, due probably to their high cost and the small acreage devoted to these small-grain crops. As the grain was being cut and bound into bundles, we boys would follow the machine and set the bundles together into shocks of ten to twelve bundles each. This was done to protect the grain and allow it to cure properly before hauling it in from the field and stacking ready for threshing later in the summer.

Threshing day at our place was usually held in late summer and required the work of twelve to fifteen men. It was the custom in our community to exchange work with other farmers in the neighborhood, we helping them in return for their help when the threshing machine came to our place. On threshing day, there

was work for all the family. The women were expected to prepare the noon meal for the men working around the machine. Before I was old enough to handle a regular job with the threshing crew, I was usually kept busy helping Mother with the dinner, by going on errands and keeping wood and water handy for use in preparing the meal.

Threshing of small grain was distinctly a division-of-labor job. Because of the number of workmen required and the expense of running the machine, every effort was made to keep it running continuously and at maximum capacity. After placing the threshing machine between the grain stacks, the steam engine which furnished the power, moved on some distance away from the stacks. It was connected with the threshing machine by means of a long belt through which the power was transmitted to it. In operation, the bundles of grain were passed from the stack to a table, fastened to the machine near the opening into which the loose grain was fed. A workman standing near the table, would cut the bands and pass the loose grain to the feeder, who worked it steadily and uniformly into the machine. In passing through the machine, the chaff and straw were separated from the grain which collected at the side and base of the machine near the middle of it. The chaff and straw were carried on through where they were discharged by a straw carrier or blown through a large pipe by means of a fan located within the machine. Workmen stationed on the grain stack, at the grain exit and at the end of the straw carrier, handled the work required at those places.

All of these things were very interesting and attractive to me until I began to take an active part in them. Then they were only hot and dusty jobs that were necessary to farm life and had to be done. Yet as I look back upon those years and consider what was required of other boys of my age in the neighborhood, I must admit that I fared exceptionally well throughout my teenage years.

Not until my two oldest brothers, Charley and Norman, began to find work outside the home to earn money of their own, was there much need for me to work in the field. I think I must have

been sixteen or seventeen years of age before I began to work regularly with a team in the field, or to do full work as a harvest hand. The time came, however, when I alone of the four boys, was left with Father to take care of the farm work. My three older brothers had been going to school at Kidder Institute and were apparently satisfied with the work they were getting there, and with the opportunities outside the farm that seemed to be opening up to them when they should graduate. It was becoming evident, therefore, that none of them planned to return to the farm, but would seek their future in the business world or in the teaching profession.

While these changes were taking place in our family life, many far reaching changes were going on throughout the country. Industrial developments in large population centers were gradually taking over the work of the many small mills then serving a single community. Labor saving machines were being introduced throughout the Nation. Free rural mail delivery had just been inaugurated at Washington and one of the routes leading out from Hamilton, included the road along the front of our house. Telephone lines were beginning to reach out from many of the towns to the farm houses round about. One of these "party lines," coming out from Hamilton to our neighborhood, included our house along with those of seven or eight other farmers in the neighborhood. While all these things tended to ease the work on the farm and increase the farmer's contact with the outside world, they were only the beginnings of the industrialization that was to become of major importance in our national life.

It was in this period that I approached the end of my teenage years and began to think of my own future. My decision against returning to Wooderson school was probably the first real step I had taken in that direction. In taking the step, I realized that I would either give my full time to the farm work or follow the example of my older brothers and go to school at Kidder Institute. The latter is what I wanted to do, but my next younger brother was only about thirteen years old and could not be expected to take over the necessary farm work.

Early in the summer, after I had told Mother of my decision not to return to Wooderson school, Father broached the subject one day and offered me a generous share in the farm if I would remain on it. Sensing, however, that I wanted to go on to school at Kidder, he suggested that if I would help get the farm work done and the corn gathered in the fall, he would see that I got the money to go to Kidder for the winter term. I was quite happy with that arrangement for it solved the problem of farm work and enabled me to go on to school. With this understanding, therefore, I spent the summer and fall, working in the hay field, through the harvest and threshing season and through corn gathering with the assurance that I would have my chance for further education at Kidder Institute.

PART II

THE YEARS OF PREPARATION

When the winter term opened at Kidder Institute in early December 1898, I was all set to begin the higher education I had dreamed about and of which Kidder Institute was the symbol, as I then saw it. Just what it was that aroused this dream of education within me, I did not attempt to analyze, however, I knew that I wanted it more than anything else at that time. Few of my young associates even talked about education beyond the country school, and few of them ever continued their education beyond it. True, I had been aware of Kidder Institute and its general character for perhaps five or six years and had listened to Professor Shaw, its principal, tell my oldest brother Charley of the opportunities it offered, when he first came to our house to discuss education at Kidder with him, and, of course, with Father and Mother. I had also heard all three of my older brothers talk about their work at Kidder and of the wider outlook it was bringing into their lives.

Underlying all this, was the general atmosphere within our home that kept us ever mindful, yet not intrusively so, of the values in life that could only be obtained through education and right living. I had always enjoyed going to school and had never disliked study, nor had I found any of my studies over-difficult. I had very little idea of how my education would be used, although I was very sure it was what I wanted. I little realized, however, that in registering for that winter term, I was thus beginning what was to become a very long, much broken into, yet very gratifying and pleasurable climb toward an education that was to take me not only through Kidder Institute but through college and graduate school as well.

A BEGINNING AT KIDDER

Kidder Institute was a small church-endowed academy, with a teaching faculty of some six or so members, including the principal. The student body consisted of some seventy-five to a hundred young men and women. Its chief purpose appeared to be that of furthering the educational facilities beyond those of the public schools in that general region; of giving its students a broader outlook on life and of fostering a wholesome Christian atmosphere within its student body.

It was governed by a Board of Trustees under the sponsorship of the Congregational church, was incorporated in 1886 and was directed, kept alive to its opportunities and largely supported through the efforts of its principal, George W. Shaw, who gave his life almost completely to it. Two general academic courses of study, in addition to music and commercial bookkeeping were made available to its students, and right here, I may add that my oldest brother Charley was the teacher that year in charge of the bookkeeping courses. He had just completed the commercial bookkeeping course at Gem City Business College in Quincy, Illinois, where he had gone at the suggestion of Professor Shaw in preparation for this position, to be held while he completed his own course of study at Kidder.

Of the two academic courses, the Classical course emphasized Latin, Greek and the arts and included a minimum of science while the Scientific course permitted a considerably greater proportion of science with a minimum of language. From the very first I was most interested in the Scientific course, not only because I had enjoyed arithmetic in the country school, but also because I believed that science and mathematics would give me a better basis and a greater opportunity for the type of work and the kind of life I wanted. Although I didn't graduate from Kidder Institute until June 1903, I managed to complete all available courses in science and mathematics, including botany, physiology, physical geography, physics, algebra and geometry, as well as three years of Latin, one year of Greek and various courses in history, grammar and literature.

As had been the case with my three older brothers before me, the necessary money which Father had promised for that first term provided for little other than tuition, books and room rent. I followed the custom, therefore, of many other students, in that I took care of my own room and prepared my meals from food brought in each week from the farm. As a general rule, when the weather was good, I walked home on Saturday evenings, a distance of four miles, and was brought back with another week's food supply on Monday. Kidder Institute held classes on Saturday instead of Monday so that study hours would not encroach on the observance of Sunday. All students were expected to observe "study hours" from seven till ten o'clock each evening preceding a school day.

During that first winter term at Kidder Institute, I was concerned primarily with my studies and most of my time was devoted to that end. I do not remember that I was much interested in the social life of the school then, or that I gave it much consideration. I was in school for three months that winter, then went back home and took care of the farm work during the following spring and summer. At the end of the summer, however, I was back again in school, this time for six months, including both the fall and winter terms. I was, therefore, able to register for courses extending through two or more terms, such as algebra and Latin. These courses opened up entirely new avenues of education to me and I found them very interesting. The Latin however proved to be one of my most difficult subjects, requiring a type of concentration I had not yet encountered, but which I have since found of considerable practical value.

The two terms passed all too quickly and again I returned home and took care of the farm work during the spring and summer. In the fall, however, I returned to Kidder for a second six months period. By this time I was beginning to feel more a part of the school and began to enter into its activities. I do not remember whether it was at this time or later that I accepted the part of David Copperfield in a student play by that name. My brother Jess was also a member of the cast, playing the part of Uriah Heap. In recalling the scene I seem to remember that as Uriah Heap, he made

quite a hit. As for myself, I doubt that it was anything more than average, for I have never been a very ready public speaker. It did, however, serve to give me a feeling of responsibility among my classmates and in the student body.

At the end of this six months period, I had completed five terms at Kidder Institute none of which had been a spring term. My previous arrangement with Father for taking care of the farm work during the spring and summer would have to be changed if I were to complete the year courses I had begun. My younger brother Harry was now sixteen years old and could help with the farm work. It seemed to me, therefore, that I should drop my studies at Kidder for a time and make use of the education I had already obtained, to earn the money for my school expenses. I felt confident that I could pass the necessary teacher's examination so I began to look about for a teaching position for that spring. I do not remember that I had any difficulty in obtaining a school or in passing the required county examination. My teaching certificate permitted me to teach in the county during the following two years.

MY FIRST TEACHING EXPERIENCE

The teaching position I had obtained for that spring (1901) was known as the Allen school, a small ungraded country school located just half way between our home and Kidder Institute. The salary was twenty five dollars per month and the pupils numbered about twenty, ranging in age from six to twelve or thirteen years. As I look back upon that first school, it brings up only pleasant memories of a type of work I really enjoyed doing. Except for the few dollars I had received for plowing corn for a neighboring farmer, it represented the first money I had ever received as compensation for work done.

Following soon after the close of my school that spring, there came a call from the wheat fields of western Kansas for harvest hands. I had never been out of the state and hardly beyond the boundaries of our home county. This announcement appeared to me

chiefly as an opportunity to get out and see some of the world about me, so I signed up to go to Ellis, a small town in the great dry-farming wheat belt in the northwestern part of the state. It was also my first opportunity for train travel. Arriving at Ellis, about noon, I went to the hotel where I was met by a farmer in search of harvest hands. He had a light buggy in which we rode out to the farm that afternoon. It was located some fifteen or more miles northwest of the town. The country-side consisted of a vast plain, covered with wheat fields everywhere as far as the eye could see. There was not a tree and very few houses in sight, the wind was blowing a gale and it seemed to me we must be nearing the end of civilization when we arrived at his home, a sod house in the midst of wheat fields.

I was with this man for about two weeks and the wind continued to blow almost constantly. The grain was cut with a "header" that cut a much wider swath than the binders used around home. The wheat heads, as they were cut off, fell upon a moving belt that carried them over to a header box, a large rectangular wagon box about six by ten feet on the bottom and about two feet deep on one side and four feet on the other. The wagon carrying the header box was driven along beside the header with the low side of the box under the upper end of the grain carrier. It was my job to receive the grain in the header box and spread it around to prevent its piling up at the end of the carrier, and to tramp it down so the wind wouldn't blow it away. As we completed one load of grain, an empty header box wagon would be ready to take its place so that we were able to keep the header at work almost continuously. It was hot and tiresome work but I was out there to see the country and to make what money I could. As a matter of fact I enjoyed the new experience.

When we had completed that job, I was taken back to town where I expected to get in with a threshing crew. However, because of rain and delays in connection with the threshing machine, I decided not to wait. Anyway I'd had enough of that hot wind-blown prairie country. It had been a great experience which I was glad to have had, but I was also glad to get away from the constant wind and back home to our rolling hill country with its trees.

During the summer I obtained a teaching position at the Rosedale school for the fall and winter terms, expecting to return to Kidder Institute for its spring term and the following year, when I hoped to graduate. The Rosedale school was situated about two or three miles north of our home. It was also an ungraded country school but somewhat larger than the Allen school. Having obtained room and board with a farm family not far from the school house, I began in early September my second term of teaching. The Rosedale school had a half dozen or so pupils who were well up in their teens. They were all well-bred farmers' children, however, and accepted me as their teacher in the school room, and as one of themselves at their evening parties. The six months spent as teacher of the school there were very pleasant and quite gratifying to me. I felt that I had done a good job and that the teaching profession might well lead to a pleasant life and to a position of some value within a community.

BACK AT KIDDER INSTITUTE

The money I had saved from the year's teaching and what I might earn through the summer months, I figured would finance me through the rest of my course at Kidder. Accordingly I began the spring term with a feeling of maturity and independence that I had not previously enjoyed. I took my meals at the Institute dining hall and entered whole-heartedly into the student life. I at once identified myself with the Junior class and began to take an active part in its social and other activities.

For the next school year (1902-03) I accepted the position of editor-in-chief of the student paper, The K.I. Review. This was a monthly magazine published by the Amphictyonian Literary Society, a student organization. With this obligation in addition to the numerous extracurricular activities that seemed to be a part of the senior year and graduating class, my last year at Kidder Institute was a very busy one indeed. It was also a very enjoyable one, in that I learned many things about life and its responsibilities quite apart from text book work. However, I came to the end of the year with a scholarship record that placed me in the number two position in the senior class.

The general program during the Commencement season at Kidder Institute was apparently arranged with the idea of demonstrating abilities of the graduates. A Class day program put on by the class and consisting of original compositions and musical numbers by the various members, preceded the graduation day exercises. On this program it fell to my lot to compose and give the Ivy Ode, on which I labored hard to get the proper rhyme and meter. The Commencement Day program included, in addition to the regular Commencement address by an outside speaker, the Salutatory and Valedictory by the two top ranking graduates. It was my duty, therefore to give the salutatory address and follow it with an oration of my own composition. I chose as my subject "The Influence of American Civilization."

AFTER KIDDER INSTITUTE, WHAT?

Commencement was over and I had completed my study at Kidder Institute. I was now anxious to make use of the knowledge I had gained there, in making a place for myself in the economic world ahead. I had enjoyed my year of teaching in the country schools and was glad to accept an offer to teach grades eight and nine in the Breckenridge school.

Breckenridge was a small town on the railroad about twenty five or thirty miles east of Kidder. This offer seemed to me a good opportunity for advancement, so I spent the following year (1903-04) in that school which employed some five or six teachers. As I look back upon that year, two things stand out most clearly. I was asked to take a young man through as much of Latin translation of Caesar as we could do, and I disliked the problem of discipline, which seemed to exist and which caused me to doubt that I would enjoy public school teaching as a life work. When the end of the school year came, therefore, I was in a receptive mood for the invitation from my oldest brother Charley to come down to Springfield, Missouri, live with him and take the stenographic course at Clark's Business College, where he was then employed as teacher of the commercial book-keeping

He was sure I could complete the course in six months and would have no difficulty in obtaining a secretarial position, which with my academic training, would soon lead to an excellent position.

The idea seemed to offer an opportunity of something better than school room teaching. I had saved a little money from my year's teaching and his letter was so enthusiastic that I dismissed the idea of any more school teaching and went to Springfield in May of 1904. I immediately entered the Business College and started in on the stenographic course. I had been going for perhaps a month and a half and was beginning to get the idea of shorthand and typewriting. But my little bank account had been rapidly decreasing. I feared it would not last me until my stenographic skill would become commercially valuable. I looked about for part time work and soon obtained a job with a second hand furniture dealer for two hours of work each day. This was a new experience which gave me a little contact with the business world. It also helped to solve my financial problem.

Before the summer was over, however, Charley left the Business College to accept an accounting position with the Frisco Railroad Company which maintained its shops at Springfield. His leaving the business college served as the opening wedge to the realization of my desire for a college education, though I didn't realize it just then. The principal of the business college offered me five dollars per week to take over the course in penmanship and letter writing. This I was glad to do, for the financial relief and the prestige it offered.

Now it had long been a more or less secret desire of mine to go to college, but I had not dared to give it serious consideration because of lack of funds. This five dollar income per week, however, seemed to weaken the barrier and I began to think of Drury College which was located there in Springfield, and of which I had heard a good deal while in Kidder Institute. It was at this juncture that Charley demonstrated to me his real brotherly spirit.

Not only did he encourage me in the undertaking but he promised to stand by me if the five dollar income should fail. By this act he gave me not only a renewed confidence in myself but also an ambition to prove myself worthy of the confidence he had placed in me. I began at once, therefore, to make arrangements for entrance into Drury College that fall. I gave up my stenographic ambitions, engaged a room at Fairbanks Hall, the men's dormitory on the campus and in September 1904, entered Drury College as a freshman student.

FOUR YEARS A COLLEGE STUDENT

Life had taken on a new meaning. I began work with a vim and took but little time out for anything but study and my work at the business college. During the fall, however, I did go on the annual college picnic, which was held at a beautiful spot in the Ozark hills some twenty five or thirty miles from Springfield by train, and attended by both faculty and students. This was the first big event of the school year for a day of fun, getting acquainted and general good fellowship. The customary freshman-sophomore struggle for supremacy served to unite the members of the freshman class and to give them the feeling of belonging, as well as to make for greater unity in each of the other classes. Fraternities and sororities had not yet made their appearance on the campus, so group spirit was built around the four college classes and the student literary societies. I also took the time to spend a couple of days at the St. Louis World's Fair with Charley who suggested that we take a day or two off for that purpose. Although we were unable to see many of the exhibits, we did get a very good idea of the expanse and general character of such an undertaking. I have always been glad that we made the trip even though our stay had to be so short.

Along about Christmas time the business college was sold and my five dollars per week income ceased. True to his promise, however, Charley did not hesitate a moment, but supplied me with the necessary cash, though he had only my word that it would be repaid. In discussing with him the difficulties that I might reasonably expect in this venture for a college education, he was whole-

hearted for my continuance and assured me of his support in any further financial assistance I might need. To me this act was more than making possible my continuance in college. It was concrete evidence of his confidence in me, which strengthened my own confidence and determination to succeed. I obtained an assistantship in the department of biology that paid my tuition, and during my sophomore and junior years, I cared for the furnace at McCullough Cottage, the girls dormitory, for my board and room. It was through Charley's efforts, however, that I obtained a position as time-keeper for an "extra gang" on the Frisco Railroad, a position I held for two summers following my freshman and sophomore years. My calls on him for money, therefore, were not very heavy. However, in 1906 I took out a thousand dollar life insurance policy for his protection.

With the means of subsistence being cared for in this way, I began to enter more completely into the life of the College. I was elected president of my sophomore class and, during that year, was a member of the staff of our college paper and of the college Y.M.C.A. cabinet. It was also during my sophomore year that I accepted an invitation to join Kappa Tau, a local fraternity, which at the beginning of my senior year, became Beta Iota chapter of Kappa Alpha, a national fraternity having at that time about fifty chapters in the various colleges and universities of the East and South. At the end of my sophomore year, I was elected one of four delegates to the annual Y.M.C.A. conference, held at Lake Geneva, Wisconsin, where I spent a most enjoyable and profitable week.

On my return from this conference, I went on into Oklahoma for my second summer as time-keeper for an extra gang of construction workers on the Frisco railroad. During the previous summer I had been able to save a considerable sum of money which enabled me to enter into college activities I could not otherwise have had. During this second summer (1906) however, after about two months of work, I became ill with typhoid fever and lay in the hospital at Sherman, Texas some four weeks with a temperature of 100° to 104° most of the time. I was listless, had no

energy, craved no food and ate very little. In fact, I didn't seem to care what happened until Charley came down to see me. His departure left me with a very great void that brought a flood of tears to my eyes. Soon afterward a long letter from Norman, my next older brother, caused another flood of tears. These two events brought back to me the idea of home and home ties and renewed my interest in life. A third event that also meant a great deal to me was the receipt of a box of flowers from my classmates at Drury. Although delayed in transit and very much withered when they arrived, I valued them greatly for the friendship and interest they conveyed. One who has never been through an illness such as mine was then, can hardly realize the lift that can come through such acts as these

I returned to school that fall about six weeks late, little suspecting that before the year would close, I would find myself in defiance of the school's administration that had shown me so many kindnesses on my return that fall. A mere turning of the switch has been the cause of great wrecks. And so it happened in this my junior year at Drury, that the innocent frolic of half a dozen boys, of whom I was one, led to the suspension of an innocent classmate. This in turn aroused a vigorous protest from the class, which succeeded only in adding fuel to the fire, and to the summary suspension of the whole class. Though we were told by the president in no uncertain terms to "get off the campus," we did not give up. While we had some stormy sessions among ourselves, we acted as a unit toward the administration and within three days received an invitation from the college head to return unconditionally. We had won our fight and in the struggle, had come to know the true worth of our fellow classmates as well as that of ourselves. Incidentally, we returned and finished our courses but as seniors we had a new college president.

It was in the summer of 1906 while I was in the hospital down in Texas that Jess, now married, and Harry went to California with the idea of entering Stanford University that fall. When school closed in the spring of 1907 at the end of my junior year, therefore, I felt it was an opportunity for me to see something of the great West and to visit my brothers in Palo Alto. Having had

a touch of malaria during my first summer with the railroad in Oklahoma and a siege with typhoid fever during the second summer, I was not interested in going south again. My brothers had written me that work was plentiful around Palo Alto and the pay was considerably more than in the Middle West. It appeared therefore that I might go out there, see a great deal of new country and stand a fair chance of coming out ahead financially. It was also in my thoughts that if Drury's president remained at the College and did not change his general attitude toward both faculty and students, I might find it desirable not to return to Drury but to complete my college work at Stanford. Here again Charley showed his interest in me by letting me have the money I would need for the trip.

In early June, therefore, I went by train to Kansas City where I spent a few days with Norman and his family. From there I went to Colorado Springs where I took the trolley over to the foot of Pike's Peak. In company with two other young men I met there, we started a brisk hike up the mountain, much too brisk we found as we reached the higher elevation. We had gone about half way up when one of the boys, already feeling the strain, said he couldn't go any farther and advised us to go on. When we were within about a mile of the summit and found we couldn't go more than a few yards without resting, we began to doubt our ability to make it to the top. Just about that time the afternoon cog-train came along. We hailed it and rode to the top nearly 14,000 feet higher than I had ever been before. I still remember looking out from there in the direction of Colorado Springs and seeing a vast plain with what appeared to be a well laid out garden plot, Colorado Springs, just beyond the foot of the mountain. It was a beautiful spot and a sight well worth the struggle we had made reaching the top. On the way back to Colorado Springs, I went through the "Garden of the Gods" and viewed with much interest those massive rocks which nature had left standing in such grotesque shapes.

From Colorado Springs I went by train through the Royal Gorge and on to Salt Lake City, thence across Great Salt Lake and the Great American Desert to San Francisco. While in Salt Lake

City, I visited the Mormon Temple Square, where I joined a group being conducted through the Tabernacle. Here the guide demonstrated its then famous organ and acoustics. The dropping of a pin on the rostrum was distinctly audible at the far end of the auditorium. While crossing the vast desert country west of Great Salt Lake, our train developed some mechanical trouble and stopped for half an hour or so in the eastern part of Nevada, far from any habitation and with only sage brush for vegetation as far as I could see in any direction. It seemed to me an even more desolate country than Western Kansas where I had worked in the wheat harvest several years before. I didn't realize then that I would spend much of my professional life in that sage brush state and would come to enjoy its sage-covered hills and its never changing yet ever changing scenery.

When I reached Palo Alto, I found that Jess and his wife Stella had gone to Yosemite Valley for the summer and had left their little cottage for Harry and me to occupy. This seemed to me quite fortunate for we were all working our way through college. Jess and Harry had spent the previous year in Stanford University and I had been three years at Drury College.

Harry and I spent the summer in and around Palo Alto working during the day (8 hours) and bicycling through the campus and much of the surrounding country during the evenings. We had no trouble finding steady work at good wages, and although the work was heavy, the invigorating atmosphere and our desire to see the country, left us at the end of a day's work with plenty of energy for the evening ride. On the fourth of July, we bicycled over the Coast Range Mountains to Half Moon Bay. It was on this trip that I had my first view of the Pacific Ocean. As we reached the top of the mountains, Harry pointed out that the little specks which we could see bobbing up and down on the western horizon were in reality the "white caps" rolling in toward the shore. At closer range it was a fascinating sight, apparently the same yet ever changing as the waves came in and broke over the sand. I still look upon it as one of the outstanding beauties of nature, though I have seen it many times since on both the Pacific and Atlantic coasts.

Although I was enjoying my stay in California, the end of August came when I must return to my work at Drury. On my return trip I spent an afternoon among the mammoth redwoods at Big Trees, a day at Long Beach and another at Catalina Island. It had been a very much worth while summer, had given me some knowledge of the great West, had increased my vision of the opportunities ahead and had a little more than paid my way.

✓ For my senior year at Drury, I had learned that we were to have a new college president and I wanted to be free to get the most possible from it. In this, Charley agreed wholeheartedly and promised to let me have the money I might need. I wanted to be free to enter more fully into the social life of the College as well as to continue the water analyses for the Frisco Railroad Co. that I had taken over during the previous year when Professor Hale of our chemistry department had been given a two years leave of absence to complete his work for the doctorate at the University of Pennsylvania. I felt this would not only give me much of the income I needed but would greatly improve my knowledge and technique in chemistry, the subject I had chosen for special emphasis. I had spent four years of study under the direction of an able college faculty, most of whom I had come to know well, and some of whom I have counted among my close friends through the years since that time.

I began this last year of my undergraduate work with a full schedule in which was a course in quantitative analysis and another in geology. I had already completed courses in general chemistry, qualitative analysis, mineralogy, blowpipe analysis and organic chemistry. I had enjoyed the courses in mineralogy and blowpipe analysis and thought geology would be a very good auxiliary course of value to a chemist. The course was taught by Dr. Shepard, a highly trained geologist, familiar with the geology of that region and of the Ozark uplift. It involved certain field trips into the Ozark region, which I thought would give breadth to my college course as well as to gratify my innate desire to learn what I could of the physical world. It was in connection with this geology course that I came to know the young lady who was later

to become my wife. Of course I had known her, Edith C. Fink, as a college classmate during the preceding three years, but only casually as a rather likable girl belonging to our class. During a geology field trip to the College Field Station at Graydon Springs, Missouri, it fell to her lot and mine to make a study of the Hannibal Sandstone, characteristic of that region. Others of the class were assigned various other topics. We made the trip of about forty miles in a three-seated horse drawn spring wagon, stopping now and then along the way for observation and study of our respective topics. Edith, whom chance had made my partner in the study, proved to be not only a good student but a very interesting companion. I learned some geology first hand and something more of her character and personality. And I soon found ways of learning still more of her. By the end of the year we had learned enough of each other, that I suspected we were both a bit sorry to see Commencement approach. However, with the end of the year came graduation with honors for both of us, Edith receiving top honors with "summa cum laude" and I, the scientific honors with "magna cum laude." As Commencement guests, I had my brother Charley who was still with the Frisco railroad and living in Springfield, and also Father and my youngest sister Clara who had made the trip from their home in Kidder to celebrate with me the attainment of this second milestone in my education and the realization of my youthful dream of a college education.

While in college I had received honors from both my classmates and the college. I had been president of my class, of my literary society and of the college scientific association. I had been an intersociety debator, a member of the cast of a college play, and one of the Edgell Prize speakers. I had been a cabinet member and a delegate to a national convention of the college Y.M.C.A. I had also become a charter member of Beta Iota chapter of Kappa Alpha, the first national college social fraternity to have a chapter at Drury College.

AFTER COLLEGE, WHAT?

Now that I had completed my college course, of what practical value would it prove to be? I was confident I had received a well rounded college education which had certainly given me a broader outlook on life and at least some of the tools to make it more effective, enjoyable and rewarding. I believed I had been well repaid for the difficulties I had encountered along the way, and for the relatively small debt I still owed for it. I was well aware, however, that I had made only a beginning in my chosen field of chemistry, a growing field that I thought would continue to challenge the best efforts of those who would keep abreast of it. I was nearly thirty years of age and did not believe I should or could continue any longer in school. I did think I might keep abreast of my field by study along with any position involving it, that I might get.

For my first position, I had rather hoped I might be able to start with some chemical industry, for I felt sure I could qualify as an analyst. I soon found, however, that such industrial positions in that general region were extremely scarce, hence was quite pleased to accept an offer by the college Administration to return the following year as chemistry teacher in the preparatory department with an opportunity to do some advance work in the College. While this position would do little more than pay my expenses, it would enable me to advance my knowledge of chemistry and so help me to a better position.

The summer of 1908, following my graduation, I spent at home in Kidder. While there I earned some money by working in the hay fields for near-by farmers. September, however, found me back at Drury, this time as teacher of chemistry in the academy and doing some post graduate work in the College. Edith, whose home was in Springfield, had also returned as a teacher in the academy and to take some post graduate work. Our correspondence during the summer had had its influence and on September 28, 1908, our engagement was settled, the announcement of which came in due course.

My work at the College had been going along for some two or three months when the Springfield high school principal, having just dismissed his chemistry teacher for unbecoming conduct with his pupils, came to the College for a substitute. I was recommended for the position. After discussing the matter with both the high school principal and the college president, I agreed to take the position. It was a tough introduction to high school teaching but I remained with it and returned the following year to teach their high school physics course. It had been a good experience and had enabled me to care for the greater part of my college indebtedness. It did not, however, attract me strongly to that type of life.

✓ In the spring of my second year at the high school, Dr. B. F. Finkel, my mathematics and physics teacher, my advisor and friend at Drury College, informed me of a scholarship in chemistry, available for the next year at the University of Illinois, and suggested I apply for it. I did apply, my application received favorable consideration and in due time I was informed that the scholarship, amounting to tuition, laboratory fees and \$250.00 would become available to me for the year beginning that fall.

This was good news to me, as I was sure it was to Edith, though it meant pushing our wedding day further into the future. We felt sure it would open the way for the advanced study that would provide the basis for a wider range of opportunity, greater satisfaction in our work and a more pleasant and satisfying life.

GRADUATE STUDY AT THE UNIVERSITY OF ILLINOIS

In the fall of 1910, I entered the University of Illinois at Urbana as a graduate student. There I met other graduate students from other colleges and universities, some just beginning as I was, and others more advanced in their work, all intent on getting a firmer grasp of the fundamental principles underlying

their work. In the Department of Chemistry, there seemed to be little or no time for anything but study, either in small groups working out the theory and problems of physical chemistry or in the laboratory, setting up or carrying through some experiment. I was not long in becoming a part of all this. I had decided on a major in inorganic chemistry, a first minor in physical chemistry and a second minor in crystallography, and had registered for graduate courses in each of these fields. Since I had never had an undergraduate course in physical chemistry, I arranged to visit the undergraduate lecture course and to do the laboratory work in connection with it.

By the end of the year, I had satisfied the requirements for, and received the M.S. degree in chemistry. I had also been offered an assistantship in chemistry for the following year. This carried a stipend of \$600.00 for the year in addition to tuition and laboratory fees. For this I would be expected to devote about half my time to the teaching of beginning students. I considered this an advantage, for it would enable me to review my general chemistry and thus strengthen the foundation of my major subject. The additional money was also a very welcome asset. I, therefore, accepted the offer and felt the way was now open for the completion of my work for the Ph.D. degree.

All of this I wrote in a letter to Edith, who was living at home with her parents in Springfield, Missouri. We agreed we could live together on this amount and our wedding day was set for June 20, 1911. On that day at the home of her parents, a quiet wedding, attended only by a few of our close friends and relatives, took place. Edith was attended by her sister Madge as bridesmaid while my brother Harry acted as best man. Following the ceremony, we went by train to Kansas City, spent a few days with my brother and family, then on to Kidder where there had been arranged a reunion of our whole family with Father and Mother. Thus Edith was introduced into, and became a part of the Sears family.

When we went to the University of Illinois that fall, we secured a small unfurnished apartment, that had once been the

livingroom-bedroom portion of an ordinary family home, situated near the University campus. Having purchased the necessary furniture for housekeeping, we moved in and settled down to the work of reaching our first goal, the Ph.D. degree for me. It was a long hard pull, filled with intensive study and careful and exacting laboratory work. I had chosen for my thesis the problem of increasing the accuracy of the atomic weight of tantalum, then a quite rare metal having an unusually difficult chemistry.

Our life was not all work, however, for we made a number of close friendships that have continued through the years since leaving Illinois. We regularly attended Sunday school and church services at the near-by University Methodist church where we met other students and faculty members. During my first year at Illinois, I was elected to membership in Phi Lambda Upsilon, a national honor chemical fraternity, and in 1913, to Sigma Xi, the national honor scientific society. Although in the laboratory, each graduate student was always busy with his own problems, there was much visiting together, discussion of problems and mutual help, all of which tended toward a very pleasant and democratic atmosphere that made for friendships and relief of tension under which all were more or less unconsciously working.

At the end of our first year together, I was given a summer school teaching position, so we were able to move into somewhat better quarters. All was going along very nicely, therefore, until the spring of 1913 when I had an accident in the laboratory that came near losing me the sight of an eye. While attempting to recover some sulphur monochloride, a terrific explosion occurred, the full force of which struck the upper part of my face and eyes. The burns though severe, did not reach the inside of my eyes except to a slight extent, so that in reality my sight was not affected. For many years, however, ingrown lashes served to remind us of that unhappy day.

It was during the year following this accident that I hoped to complete my work for the doctorate. It was a year of intensive work, including the laboratory work necessary to complete

my thesis problem, the writing of my thesis and the final examinations. This work was accomplished, however, and in June 1914, I received from the University of Illinois the degree, Doctor of Philosophy in Chemistry. My work as a student was at an end. Sixteen years had elapsed since I had entered Kidder Institute for that first winter term in December, 1898, little realizing I would spend the following sixteen years in preparation for my life's career. We were both thoroughly glad that the constant grind that had been necessary for its accomplishment was over, and quite happy that I had been asked to continue in the department as an instructor for the coming year.

I had been at the University of Illinois for four years, during which time my interest and my work had been centered in the field of chemistry. My vision of that field had been greatly increased and my knowledge of it had been considerably extended and deepened. I had come to realize quite fully that it was a growing field, that there were many things yet to be discovered, and that it would continue to require much reading and study if I hoped to keep abreast of the new discoveries continually being added to it. I had joined the American Chemical Society during my first year at Illinois and had been receiving its three publications. These gave me access to most of the research being done at that time. The wide diversity of subject matter that I found in these journals, not only gave a first hand knowledge of its widely diverging applications but soon showed me the necessity of specialization if I expected to take an active part in the development of this rapidly advancing science.

It had of course been an essential part of earning the Ph. D. degree, to obtain a thorough knowledge of the basic principles involved in chemical change, a well rounded factual knowledge of the fields of organic, inorganic and physical chemistry and a considerably more complete knowledge of my special field. I had chosen inorganic chemistry as the basis of my specialization and had taken most of the courses offered in that division. In my thesis work I had developed a degree of confidence in my

own work and had learned to base my judgment on it. I had grown to enjoy my research and also the teaching of university students. The two kinds of work seemed to fit well with each other so that each could benefit the other. Industrial research opportunities at that time were much less bright, hence the opportunity of continuing in the department as an instructor was received with considerable satisfaction.

PART III

MY PROFESSIONAL CAREER

During my last three years as a graduate student at the University of Illinois, I devoted about half my time to the teaching of general chemistry and qualitative analysis. In doing this I was able to provide the income for our living expenses and at the same time obtain an excellent review of general inorganic chemistry. It also enabled me to broaden the scope of my teaching experience and perhaps determine more definitely whether I should continue in that profession or look ahead for an industrial opening. I had not been long at this new teaching experience until I noted the marked increase in maturity and responsibility for subject matter, shown by these students, over that exhibited by the high school students I had had just before coming to Illinois. I could hardly believe that an age difference of one year, or at most two years, could account for the change I found. But whatever the reason, it had the effect on me of greatly enhancing the desirability of the teaching profession. I soon found myself enjoying the work of helping those students and of observing their progress. The more I got into the work, the more the teaching profession, as practiced in the university, appealed to me as an enjoyable and worthwhile life work.

As those three years of study, teaching and research progressed I became more aware of the vast scope included within the field of chemistry, of the amount of it that remained as yet unknown, and of the interest it could develop in one. My research was beginning to yield new information, my laboratory

techniques were standing up under the most rigorous tests, and I was arriving at conclusions based on my own work. It was all most interesting and full of challenge. I was learning to meet these challenges with confidence, and from it all, I concluded that the work of a university teacher must certainly include both teaching and research, a combination that would keep the teacher close to the fringe of knowledge in his subject and hence full of interest and value. When the offer of an instructorship in the Department came to me during the early spring of 1914, preceding the Commencement on which I was to receive the Ph.D. degree, I was quite ready to accept it for its interest, its challenge and the kind of life it promised.

INSTRUCTORSHIP AT THE UNIVERSITY OF ILLINOIS

We continued at the University of Illinois for three years. My teaching assignment remained pretty much as it had been as a graduate assistant, except that my responsibilities were increased from year to year. I was given certain committee responsibilities and during my third year, was placed in general charge of the qualitative analysis division, left vacant by the resignation of its former director. This included the taking over, as supervisor, of a graduate student working toward his master's degree. I particularly recall the work of one committee on which I served which had to do with the rating of applications for graduate assistantships. Professor W.A. Noyes, then head of the Department, in giving instructions to the committee, made the statement that other things being equal, the small-college graduate should be given preference as the better man, a conclusion I had already reached from my association and observation as a graduate student.

During these three years I had published two research papers. The first was the results of my doctoral thesis, The Atomic Weight of Tantalum, a redetermination using the ratio $\text{TaCl}_5: 5\text{Ag}$. In this study I obtained a lower value with closer

checks than had been obtained previously, but I had raised the question of the value of TaCl_5 for use in this relationship. It was this investigation that formed the subject of my second publication which appeared in 1917.

It was during these three years also that our first child, Howard William, was born (Jan. 31, 1915), that Cousin Caddie made us a three weeks visit (Mar. 1916) on her way home to Buffalo, New York, following an extended visit with Father and Mother in Kidder, Missouri, and that Father and Mother, ages eighty one and seventy one, respectively, came to spend the winter with us (1916-17). It was while they were with us that we children conceived the idea of each writing the story of his or her life, and of presenting these as a combined gift to them in celebration of their forty fifth wedding anniversary (Dec. 19, 1916).

These three years, therefore, had been filled with living as well as with work. We had been able to live comfortably and had put aside a small amount of money for that special occasion or special need that so often comes unexpectedly. I was to teach during the summer session of that year (1917), and would have only the month of August for the vacation we hoped to take away from the University and the confines of civilization. By the time August had rolled around we had, in company with some close friends, Dr. and Mrs. H. L. Creek of the English Department, engaged a mountain cabin some distance west of Denver, Colorado, reached by a narrow-gauge railway out of Denver. Since both they and we wanted to stop off for short visits on our ways to Denver, we arranged to meet there and go the remaining distance together.

Just as we were about to leave Urbana for the trip west, a message came to me from my brother Harry, telling of a vacancy in the department of chemistry at the University of Nevada at Reno, and that I could probably have it if I was interested. I had been informed somewhat earlier by Dr. Hopkins, then head of the inorganic division, that President James of the University, was

opposed to advancing Illinois men on the basis of inbreeding, and had refused to advance me to the rank of associate that spring. It seemed to me, therefore, that my future was not to be at Illinois. When Harry's information, concerning the opening at the University of Nevada came, my interest in it was aroused but I wanted more information concerning it. Since the Creeks had already begun their trip west and we couldn't contact them, we decided to proceed with our trip but to ask that the University of Nevada wire me at Boulder, Colorado where we would be visiting before meeting the Creeks in Denver. When we arrived in Boulder, a telegram awaited me, giving the desired information and offering me an instructorship with what appeared to be good opportunity for advancement, at \$1,500.00 per year, an advance of \$300.00 over what I had been receiving at Illinois. After carefully considering the possible effects of this change, we decided in favor of it and wired acceptance.

WE MOVE TO THE UNIVERSITY OF NEVADA

The immediate effect of my accepting this position was to eliminate my vacation in the mountains, since the new position called for my presence on the campus in Reno, early in September when the fall semester would begin. It would be necessary for me, therefore, to return at once from Boulder to Urbana, prepare our household goods for shipment and get them on the way as soon as possible. I would then return to the mountain cabin remain there as long as time would permit, when we would proceed on west to Reno. The result was one day for me in the mountains, enough to see something of the kind of scenery the others had been enjoying and to bid our friends, the Creeks, good-bye.

We arrived in Reno on the morning of August 31, 1917. The fall semester at the University was scheduled to open within the next few days, enough of an interval we hoped, to secure a place to live and to learn something more of our new position

and new surroundings. We did manage to rent a very satisfactory five room cottage just across Virginia street from the front campus, also temporary housekeeping rooms until our furniture should arrive. We also met a few of the faculty members with whom we would be associated and saw something of the character of the surrounding country.

Reno, at that time, was a town of about 12,000 inhabitants. Situated as it was in a basin-like valley, some 4,500 feet above sea level, almost completely surrounded by mountains in a vast desert region, it presented a strong contrast to anything we had previously experienced. Homes within the town, however, were well supplied with trees and green lawns, the greenness of which was in striking contrast to the barren country-side. The University campus, situated at the north edge of town on rising ground close to the north rim of the basin, was very pretty where it had been landscaped and used. Otherwise it was but a part of the desert. The cordiality of the people, however, and their evident desire to make us feel at home, the invigorating atmosphere and the abundant sunshine soon overcame any feeling of disappointment we may have experienced when we first saw the town and surrounding country.

The department of chemistry was housed in a relatively small stone building, in contrast with the brick construction used in all other campus buildings. It contained a single lecture-recitation room, three student laboratories, a small stock room and office-laboratories for full time members of the teaching staff. One of these office-laboratories was to be for my use. The department staff consisted of Dr. Maxwell Adams, Ph.D. from the University of Chicago and a year of post doctoral study in Germany, as head of the department and myself, as full time members. In addition, Dr. C. A. Jacobson, Ph.D. from Johns Hopkins, as agricultural experiment station chemist, taught a course in physical chemistry and Mr. Dinsmore, head of the state food and drug control laboratory, taught a course in agricultural chemistry. Dr. Adams taught the regular courses in organic chemistry and quantitative analysis

and I was to have charge of the beginning work in general chemistry and qualitative analysis, in addition to an upper division course in the field of my special interest. This course I listed as the chemistry of the rarer metals.

EARLY YEARS AT NEVADA

I had not been very long at work before I realized that the University of Nevada was primarily a teaching institution and that any research done by a full time instructor would have to be done in addition to his full time teaching load. I had been long enough at the University of Illinois to realize that if a teacher hoped to advance in his field and achieve recognition in it, he must also become a contributor toward its development. I had enjoyed the combination of teaching and research at the University of Illinois and strongly believed that a university chemistry teacher must keep close to the fringe of knowledge in his field if he could reasonably expect his students to do their best work and in so doing, given standing to the department and to the university. It seemed to me, therefore, that research must continue to be a part of my job.

Dr. Adams had been at the University for some ten or more years and had published in the chemical journals several research papers dealing with the essential oils found in sagebrush. I was sure, therefore, I would have his encouragement for any work I might wish to do in my field of inorganic chemistry. I decided, however, not to continue further with atomic weight investigations, but to direct my research more closely toward the unsolved teaching problems and those of Nevada's mineral industry. Most of the chemicals and apparatus would be readily available for those problems. Any literature searches would be useful for class work as well as for research, and relatively short time periods between teaching duties could probably be utilized more effectively.

Right in line with this conclusion, I received a letter from Dr. B.S. Hopkins, my former colleague at Illinois, asking if I would be willing to prepare an article on Tungsten, Tantalum and Columbium for School Science and Mathematics, for which he was at that time a contributing editor. Since I had worked with tantalum and columbium during most of my stay at Illinois and tungsten was of considerable economic importance in Nevada, I looked upon the request as an opportunity and accepted the invitation at once. This paper was published in the Feb. 1918 issue of the journal and a second request article on Recent Developments in the Fixation of Atmospheric Nitrogen appeared in the June 1918 issue of the same journal. Both of these articles were reviews of the chemical literature, which I was able to make good use of in my teaching, and which may have had some effect on my promotion and salary increase for my second year.

When I accepted the position at Nevada, I did not know that the University had just passed through an administration upheaval, resulting in the dismissal of its president and the loss of one or two of its faculty members. I had not been there very long, however, before Dr. Adams informed me of the fact and that it had involved primarily the former president and his favoritism for the college of agriculture. He didn't mention names and I didn't inquire because I didn't want to be drawn into any faculty feud that might still exist and had best be forgotten as soon as possible. A new president, Dr. W E. Clark, from City College, New York where he had been professor of economics and political science, appeared on the campus at the opening of the second semester. University work had moved along very smoothly since I had arrived in the fall and if there were any ruffled feelings among the faculty, they did not become apparent to me.

The second semester of that year was of special consequence to me for its gradual though almost continuous loss of students. With the entrance of the United States into the World War, and its call for young men, hardly a week passed during which I did not lose to the air corps one or more men from my

beginning qualitative analysis course. There seemed to be a very strong desire among the young men of that time to "join the air corps and see the world." Of the forty or so students enrolled in the course at the beginning of the semester, not more than half remained to complete it. This of course lightened my teaching work considerably and gave me time to study the course, its problems and how best to improve it. I had had in mind for some time, that the systematic qualitative analysis for the more common metal ions, which had been worked out some years before by A. A. Noyes, had not only made their classification and study easier as well as more interesting to the student, but it had also been of much practical value for their detection in unknown mixtures. Nothing of like character had ever been done for the more common acid ions. It seemed to me that a systematic scheme of analysis that would include a reasonable number of the more common acid ions would not only simplify their teaching but would also be of practical value. Such a study would adapt itself readily to long or short periods of time and could be sandwiched in with my teaching work quite easily. A part of this problem could and probably would involve the selection of certain already known reactions, but a part of it would necessarily involve the working out and testing of new reactions.

I began work on this problem during that light second semester when I could give some time to its formulation and tentative outline for study. My first paper dealing with this field was on The Separation and Detection of Arsenate and Arsenite, published in the Jour. Amer. Chem. Soc. for March 1921. In working out the procedure for the general systematic analysis I made use of known reactions as much as possible, tested their sensitivity and reliability under the conditions involved, and finally gave the procedure to my own students in qualitative analysis, in order to determine its practicability in the hands of beginners. The completed systematic scheme included some twenty two different acid ions.

While all this was being done, I made a critical study of the usual textbook procedure of acquainting the students with

the various reactions involved in the metal ion analysis. From this study I became convinced that it would be more effective if the students would compare the reactions of a reagent on the various metal ions in a given group, rather than the method then in use of showing the reactions of the various reagents on a given metal ion. This idea was formulated and also placed in the hands of my students for their reaction toward it.

The success of the anion procedure and the change in method of reaction study in the hands of my own students convinced me that they were of sufficient value to both student and teacher, to warrant their publication in textbook form. I therefore prepared the manuscript to include these findings and submitted it to John Wiley & Sons, New York publishers under the title, A Systematic Qualitative Chemical Analysis. In a short time I received their approval of the manuscript and its acceptance for publication. The first edition appeared in 1922 and a second revised edition was published in 1926. Considering the many texts on qualitative analysis in the field at the time, I was quite well pleased with its general reception.

A PERIOD OF DECISIONS

Numerous other things than teaching and research claimed my attention during those first years in Nevada. We spent our first Christmas (1917) with Father and Mother at their new home in Berkeley, California where they had gone to live near my brother Harry, since leaving our home in Urbana that previous spring. Our second child, George Wallace, Jr. was born on October 27, 1918. And toward the end of that second school year I received a letter from Dr. H. C. P. Weber, a former Illinois colleague, but at that time a research director for Westinghouse Electric Company at Pittsburg, Pennsylvania, offering me a research position with Westinghouse at a considerable increase in salary over what I was then getting at Nevada. This letter confronted us with a decision between the academic career we were

enjoying and felt we knew something about, and a career of industrial research in which we had had no experience. To make the change would materially increase our income and ease our financial problems. It would, however, necessitate moving back across the country from an invigorating climate we had come to enjoy and like, to an eastern city, known generally as the most smoke-ridden city in the United States. It would mean entering a type of work still relatively new in this country, work which might become the first to be abandoned in case of a depression. It was not an easy decision to make, but after carefully considering it pro and con and talking with both Dr. Adams and President Clark on what we might reasonably expect at the University, we decided to remain at Nevada.

In the late spring of that second year at Nevada, also, we were informed by our landlord that he had given our home to his daughter who was getting married that spring and would want to move into it. This of course meant that we would have to find another place for ourselves. We had been planning a vacation for that summer on the beach in the vicinity of Santa Cruz, California. After some inquiry concerning houses for rent, we decided to store our furniture and await our return to find a place to live.

On the second day of June following the close of school, therefore we started out in our newly acquired car, a small second hand touring Overland. It was our first experience of driving a car through the mountains. The roads via Carson City, Lake Tahoe and Echo summit were unpaved and very rough, but we made it, though it took us the better part of four days to reach Berkeley where we stopped for a few days with my sister Clara and her husband. Father and Mother, who had sold their home in Missouri and had come to live in Berkeley some two years before, had just recently gone to Palo Alto to live with Jess and Stella, a move deemed advisable because of Father's failing health. It was while we were stopping off for a short visit with them on our way to the beach that we had the

opportunity of seeing again, at a sort of family reunion, not only my father and mother but all of my brothers, including all or parts of their families as well as Clara and family. It was a most enjoyable event and one we all realized might never be repeated.

At Seabright, a little coast resort just outside of Santa Cruz, we rented a cabin and spent about a month enjoying the sun, the sandy beach and the breakers in our first real vacation alone. Our time was largely spent on the sand and in the water. The weather was delightful and we came away much refreshed and ready for the work that lay ahead.

On our return to Reno, we soon found that suitable houses for rent were just not to be had and that if we were to have a home, we would have to buy it. As luck would have it, there was on sale an old though well preserved one story house, situated down Virginia street, a short distance from the house where we had been living the two preceding years. It belonged to an estate, had just been through the court for title clearance, and the sale price (\$3,000) seemed to us reasonable and within our means. We like the neighborhood, the view across the front campus and the short distance to and from work. We arranged, therefore, to buy this place, even though we would not be able to get possession for about a month. How and where we lived during that month is a long story, involving three or four moves, but in it all there was much evidence that friendships we had made since coming to Nevada, were real friendships indeed.

We finally moved into this house, however, on September 8, 1919, the house that was to remain our home for the next twenty four years. During that fall and winter, we spent much of our spare time working on plans for its remodeling to give us the room and conveniences we wanted. The following summer we obtained carpenters to carry out those plans.

At the University, the resignation of Dr. Jacobson had left our department without a teacher for its physical chemistry. Since I had taken a number of graduate courses in that field and

appeared to be the best prepared of anyone available to handle the course, I agreed to take it over until a specialist in that field could be obtained. Since this necessitated additional teaching help in the department, it marked the beginning of the use of graduate students in our Freshman chemistry laboratories. From then on, we began to provide advanced work for these graduate assistants and any others desiring to work for the Master's degree in chemistry.

It was during the early spring of this same year (1919) that my sister Bertha and her younger son Leland Stephens stopped off for a few days with us, on her way to Berkeley where they were going to visit Clara. During the following summer, while we were in the midst of remodeling our house, Edith's sister and mother came to live in Reno and of course stayed with us until they could find suitable quarters. It was also during that summer that we received a letter from Jess, stating that he had been given a sabbatical year from Stanford and expected to go to the University of Minnesota for the year. Would we be able to keep Father and Mother with us that winter? We could see no reason at that time for not doing so, since we expected to have a new furnace in our house and the carpenter work sufficiently completed to be comfortable for them. We therefore wrote Jess to go ahead with his plans and we would be ready by fall to take care of Father and Mother, not knowing that before fall should come, we would receive an offer from Iowa State College to take over their qualitative chemistry division at a considerably better salary than we were then getting at Nevada. This posed a very real problem, for we knew that Iowa State College was much larger and very probably a much richer institution than the University of Nevada. It would undoubtedly offer better opportunities for advancement, though we realized the climate and general living conditions there, could by no means equal the general atmosphere and surroundings we had been enjoying at Nevada. We could also see that our house would not be in a very favorable condition to sell. In addition to these things, we knew that Father and Mother were counting on being with us for the winter, and that Father's health had been steadily failing so that he could do very little if anything to help himself. It was a hard problem to solve but we solved it and have never regretted our decision to remain at Nevada.

Father's health continued to fail through the fall and early winter and during the early morning of December 28, 1920 he passed away in his sleep. At Mother's request, we took him back to Palo Alto for burial. Mother remained with us for several months, but following a comparatively light stroke, she returned to Berkeley to live with Clara who was better able to care for her. Our third child, Margaret Marie was born December 8, 1921. Although Mother seemed to recover completely from the stroke, she aged considerably and finally on the evening of August 4, 1923, she passed away, just a little more than two and a half years after Father's death.

DEVELOPMENTS WITHIN THE DEPARTMENT OF CHEMISTRY

During the years immediately following the First World War, enrollment at the University increased quite rapidly. In 1921, a third full time instructor was added to the department of chemistry and in 1924, he was succeeded by Dr. W. M. Hoskins, Ph.D. from the University of California, who was to take over the physical chemistry work and develop that phase of our program, thus enabling me to give my time more completely to the inorganic and analytical work. At about this time, Dr. Adams was made Dean of the College of Arts and Science and I was advanced to a full professorship. It was also about this time that Mr. W. F. Hoskins, father of Dr. W. M. Hoskins, became our first full time store keeper.

The department was not only growing in size but it was visibly gaining prestige on the campus and becoming more favorably known outside. My advanced inorganic chemistry course, in which I was especially interested, had been conducted largely as a literature search on the relation between the properties of the various elements and their position in the periodic table.

This had been met with considerable enthusiasm by the students so that both teacher and students were not only increasing their knowledge of chemical change but were beginning to develop a new concept of the relationship between the various elements.

During the year 1923-1924, I had a somewhat larger class in this course and class recitations began to take the form of a debate. Questions were raised concerning the relation between the properties of the elements and their position in the periodic table. There were always two sides to these questions. Did the intensity of any given property increase or decrease with increasing atomic weights within a group or period? Student preparation consisted in one section of them searching the literature for all facts indicating an increased intensity, while the other section would gather the facts indicating a decrease.

Before the year ended these students showed exceptional interest not only in the course but also in chemistry as a possible vocation. As a means of satisfying the latter interest, I invited all of the students majoring in chemistry together with the chemistry teaching staff to a social evening at our home, for the purpose of discussing chemistry in general and opportunities in the field. The outcome of this meeting was the formation of a local student honor chemical society, to which we gave the name, Sigma Sigma Kappa. This society still exists as one of the strong departmental groups on the campus. Membership qualifications were patterned largely on those of Phi Lambda Upsilon, a national honor society to which I had been elected as a graduate student at the University of Illinois. The name Sigma Sigma Kappa was taken from the names of three outstanding chemists representing three ideals of the chemist; accuracy, exhibited by Stas whose atomic weight determinations represented the first highly accurate analytical work in chemistry; clearness of expression, shown in the classic general chemistry texts of Alexander Smith; and independent thinking, demonstrated by Kekuli in his use of the benzene ring explanation of organic molecular structure. Through the efforts of Sigma Sigma Kappa, the U. of N. Chem. Club soon came into existence, the object of which was to bring together all students interested in chemistry, from which could be chosen the most outstanding for the honor society, Sigma Sigma Kappa.

A second outcome from my advanced inorganic chemistry course appeared when I began to realize we were uncovering a mass of chemical facts which could be classified under one or the other of two apparently fundamental characteristics of the elements. By extending the meanings of terms already in common use, I described these fundamental characteristics by the names Activity and Basicity. We were finding that the intensity of each of these characteristics was varying in accordance with a regular pattern, when considered in relation to the position of elements in the periodic table. In order to show this relationship more effectively, I worked out a new form of periodic table. This table including an explanation of its use appeared in the October 1924 issue of the Journal of Chemical Education under the title, A New Form of Periodic Table as a Practical Means of Correlating the Facts of Chemistry. How well it was received is hard to say except that I did receive a request from an author in one of the eastern states for permission to use it in a high school text he was preparing. The request was of course gladly granted.

Out of this chemical relationship study came also the ideas for most of my laboratory research and for that of students working under my direction. In 1925 I published the first of three papers on Critical Studies on the Fusion of Rare Metal Ores, I. The Pyrosulfate Fusion of Titanium Ores, J.A.C.S. 47, 922, (1925); II. The Separation of Tantalum and Columbium, J.A.C.S. 48, 343 (1926); III. The Determination of Tantalum and Columbium, J.A.C.S. 51, 122 (1929).

TRAGEDY STRIKES OUR HOME

As an after-math of the war and amidst all our activities at the University, there came to Reno during the very early twenties that devastating Spanish influenza epidemic, taking its toll from both the town and the University campus. Our own family, however, was not seriously affected by this, but in 1924 a more subtle and unsuspected malady made its appearance, first in the school room of our oldest child, Howard, then about nine

years old. On Wednesday, October first, he became ill in school and came home, and on Sunday morning, following a rapid rise in temperature, he passed away. The doctor had said it was appendicitis. We had noticed a difficulty in his swallowing and insisted on an examination by a specialist before operating. It was all to no avail, however, but on the next day after the funeral, I think it was, the doctor came to our home on his own volition and asked to see the other children. George, our second son, had not been feeling very well and was upstairs lying down. After looking him over, the doctor suggested that his spinal fluid be examined at once, and telephoned the state hygienic laboratory where tests of that character were made. The result was a positive test of poliomyelitis.

For the following three weeks or so, a doctor came to the house almost every day to note his condition and any sign of paralysis. None was found. Meanwhile, our house was under quarantine and in order to continue my University work, it became necessary for me to remain away from home during that time. However, I kept in touch by coming along our street each day, stopping out front and inquiring about conditions within. It was a long and difficult three weeks and we were thankful to see its end with both of the remaining children entirely well and unaffected by it.

THE DEPARTMENT HEADSHIP BECOMES

MY RESPONSIBILITY

Dr. Adams was made vice president of the University in 1926 and I was advanced to head of the department of chemistry. Up to this time, I had been quite fully occupied with my own teaching and research, and had given little thought to many of the other things essential to a smooth running and well developed department. I had of course counceled with Dr. Adams on many of the problems that had arisen from time to time but they had

been his responsibility and had not required a great deal of my time. I had from the very first, however, been much interested in the development of the department and I strongly believed that a first class department could result only if it could run smoothly and keep a first class staff. This was now my responsibility and I soon found that it not only consumed a good deal of my time but required a lot of thinking as well.

Our faculty science group was small but it had been relatively active ever since I had been on the campus. Most of its members were also members of the American Association for the Advancement of Science. Through their meetings together for mutual benefit, they kept science alive on the campus and themselves interested in the activities of the National Society, and particularly its Pacific Division which held annual meetings usually at one of the universities along the Pacific coast. In 1927, however, its meeting was to be held on our campus. Our local group, therefore, was much interested in seeing that this first meeting at Nevada would have an attractive program. The geologists were arranging for a trip to Pyramid Lake, on which they would show the visitors the extent, the various shore lines and geology of the ancient Lake Lahonton, of which Pyramid Lake is the last remnant. The biologists were concentrating on the fish life in Pyramid Lake. The department of chemistry might not be able to provide as spectacular a program as the geologists or biologists but we intended to make it as worthwhile and as interesting as possible to the visiting chemists. The chief responsibility for this program was pretty much up to me. Responsibility for social entertainment was taken over by the women's faculty club of which Edith was president that year. Hence, we were both deeply involved in whatever success the meeting might bring.

The meeting, scheduled for the latter part of June, was well attended and apparently much enjoyed. For the chemists, we had been able to prepare for a full day's program, at the end of which the suggestion was made that a Pacific inter-sectional division of the American Chemical Society be formed

with meetings coincident with the Pacific Division of A.A.A.S. and that a general chairman for the coming year be chosen. The program we had just been listening to was apparently satisfactory for I was chosen as the first general chairman.

That meeting was my first extra-curricular responsibility as department head, but it was by no means the last. With the assurance of an annual meeting of western chemists for the presentation of research papers, I felt that I could do a better job as department head by attending those meetings as regularly as possible, by taking an active part in them and by getting acquainted with as many of the other chemists as I could. Consequently we made it our practice to take our vacation each summer at the time of the meeting, renew acquaintances among the chemists and present a research paper as often as possible. In general we drove to the place of the meeting, remained there for its various activities, after which we would either make a short visit with one of my brothers or my sister who lived in that general region or stop for awhile at some beach resort. It was through getting acquainted at these meetings that our university group received an invitation and was made a part of the Sacramento section of the A.C.S., the September meeting of which was to be held on our campus and the October meeting scheduled for a week end when our group would be able to drive over the mountains to it. Through the years that followed, these two things proved of much value in overcoming the mountain barrier that tended to isolate us.

I had joined the American Chemical Society in 1911, as a graduate student at the University of Illinois, had attended its Illinois section and two or three of its national meetings before coming to Nevada. I had begun to appreciate its value to would-be chemists as well as to chemists. I had learned something of its general organization, of its encouragement of research and of its provision for social and professional contacts. I realized when I left Illinois and came to Nevada that I would probably have much less opportunity of attending these meetings, especially those of the National Society, most of which would probably continue to be held in the east or middle

west. On coming to Nevada, therefore, and finding most of the science faculty affiliated with the American Association for the Advancement of Science, I joined with them but retained my membership in the A.C.S. I was particularly glad, therefore, that the A.A.A.S. meeting on our campus had resulted in the formation of the Pacific Intersectional Division of the A.C.S. and in our affiliation with the Sacramento section. In becoming a part of these organizations we could at least keep in fairly close touch with western chemists.

The National A.C.S., however, did have an occasional meeting in one of the larger cities along the Pacific coast. It was at one of these meetings that I was brought into more direct contact with the society. The secretary of the division of chemical education, finding that he would not be able to attend the San Francisco meeting, held during the early twenties, asked me to take over his duties there. In doing this I was thrown into more direct contact with the officers of the division and with the editor of the Journal of Chemical Education. The result of this was a request from the editor that I serve as western contributing editor for the Journal, a position I continued to hold for several years.

Some three or four years before the A.A.A.S. meeting at Nevada, I had been trying to find a more satisfactory method of teaching the general chemistry of the metals. I wanted to get away from what I had considered, even as a graduate student, as too largely a memory course and too illogically arranged. I had worked out a syllabus for student use, in which the chemistry of the metals was more nearly correlated with the qualitative analysis, a laboratory course that usually paralleled the general chemistry course. The use of the syllabus had developed greater interest on the part of the students and had made a more logical arrangement of the subject matter. This change seemed to be worthy of consideration by the teaching profession so I prepared a paper for publication under the title, The Correlation of the General Chemistry of the Metals with Qualitative Analysis, which was published in the Jour. Chem. Educ. for May 1927.

Not long after the publication of this paper, I received a request from the program chairman of the A.C.S. division of chemical education, asking me to take part in a symposium on qualitative analysis that was being arranged by the division for the next meeting of the society, soon to be held in St. Louis. To go to St. Louis for the meeting would be a long and expensive trip, but I thought Pres. Clark might consider it to be of sufficient value to the University to furnish transportation costs. He was quite agreeable to that idea so I accepted the invitation. I would be expected to discuss formally a paper, given by Dr. Reedy of the University of Illinois, on the Objectives and Content of the Elementary College Course in Qualitative Analysis. Both paper and discussion were later published in the Jour. Chem. Educ. for August 1928.

The years 1928-1930 were busy ones for the new head of the department. Dr. Hoskins, who had been doing an excellent job of strengthening our physical chemistry division, resigned to accept a position at the University of California. It was my job to find a replacement which at that time was difficult, largely because of the low salary I was able to offer. While this was my first experience of losing a good man because the University was unable to provide sufficient opportunity for advancement, it was not to be the last. I have always believed, however, that the department was kept stronger because of having good young men who would perhaps remain only a few years than to be saddled with mediocre men willing to take whatever should come.

It was also about this time that the Director of the Bureau of Mines at Reno informed me that the Bureau would have some money for research during the next year or two and would like to use it in support of the work I was then doing on the determination of tantalum and columbium. It would employ me for summer work as consultant. I was of course glad to receive this acknowledgement of the work I had been doing with these elements as well as to have the added remuneration. For the next couple of years, therefore, my research on these elements was done under the auspices of the Bureau of Mines and so published in 1929 as my third paper in the series of researches on the Fusion of Rare Metal Ores.

THE DEPARTMENT MOVES INTO ITS NEW

BUILDING

It was during these years of 1928-1930 also, that we were kept busy with the plans and construction of our new building that was to house the departments of mathematics, physics and chemistry. The building was the gift of Clarence Mackay, son of John W. Mackay of Virginia City mining fame. Since the department of chemistry was to occupy about half of the building, there was a good deal of planning to be done, as well as consulting with architects and engineers. Much of this became my responsibility. In the fall of 1930, however, we moved into our new quarters with its modern furnishings and laboratory equipment. It was a much needed building and represented a marked advance over what had been the home of the department almost from its beginning.

The department had been increasing in size as also had the University. Requests for additional course offerings in biological and food chemistry were being made by the department of biology and college of agriculture. With our new and much expanded quarters, we were in a position not only to handle this work but also to expand our own offerings for the benefit of students desiring to make chemistry their profession. When Dr. Adams took over the additional administrative work as vice president of the University he gave up the greater part of his work in the department of chemistry and a new full time instructor with special preparation in biochemistry was obtained. The department was manned, therefore, with three full time teachers and a graduate assistant or so in addition to Dr. Adams who still taught the main course in organic chemistry. The graduate assistants were used only in connection with the beginning courses for laboratory and quiz instruction, the remainder of their time being devoted to study leading to the M.S. degree in chemistry.

Some four or five years before moving into the new building, we had begun to offer a more specialized undergraduate course leading to a B.S. in chemistry. The introduction of this course in the University catalog was instrumental in calling students attention to the type of background knowledge essential to one desirous of entering chemical industry. Also it had the effect of bringing a number of good students into the department, many of whom not only obtained the B.S. degree, but either continued with us for the M.S. degree in chemistry or went on to a larger university for the Ph.D. degree in chemistry. For most of these latter students we were able through the years to obtain graduate assistantships which gave them the financial assistance they often needed and the incentive for further education. I think it is a fair assumption that much of the prestige enjoyed through the years by our department, came through the high quality work done by these graduate students.

CHEMICAL INDUSTRY ENTERS NEVADA

The completion of Boulder Dam (now Hoover Dam) and the utilization of power from it for the production of Magnesium metal, marked the beginning of chemical industry in Nevada. Magnesium was then a relatively new metal just beginning to be of industrial importance. In company with a small group of faculty men from our School of Mines, I made the trip to Las Vegas and Boulder City to see the dam and observe the process being used to extract the metal. While there, I was given for our department, a large sample of the first magnesium metal that had been produced in the plant. It was not long after our return from this trip that I received a request from the Coast Banker, a California banking magazine, asking me to prepare an article on this new Nevada industry for their publication. This article appeared in its March 20, 1930 issue under the heading Sees New Industry.

It may be of interest to mention in this connection that the product of magnesium in this plant was soon discontinued because of its inability to compete in the open market with other methods that had been worked out and put into use. However, chemical industry as such did not entirely disappear from that area, for the buildings and equipment were soon made available to other chemical manufacturing industries which came in and still continue to form an important chemical manufacturing center in southern Nevada.

It was just before our inspection trip to the Magnesium plant that I had accepted an invitation from the director of the local Bureau of Mines to prepare a paper on Progress in the Production and Use of Tantalum for presentation before the American Institute of Mining and Metallurgical Engineers meeting in New York City. This paper was presented at the meeting by the Nevada delegate and published as their Technical Publication No. 279, dated Feb. 1930.

This invitation came to me very probably because of my researches on the analytical chemistry of tantalum and columbium and their relation to the basicity theory I had previously proposed as a fundamental property of elements. This work had not only demonstrated the correlation between the properties of an element and its position in the periodic table but had given evidence that a practical separation of the two elements from each other might be possible by means of a procedure I had used.

An explanation for this correlation came only as the complexity and general structure of the atom became known. I had shown in a paper published in 1924, that for the purpose of correlating the facts of chemistry, relative activities, relative basicities, and physical properties of the various elements are fundamental characteristics that must depend on the character of the atom. The paper included a new form of periodic table to show these relationships. With the assistance of students in my advanced inorganic chemistry course, working on specific

problems in the laboratory, the study of these relationships to atomic structure was continued. By 1932 or 1933, I was convinced that there were two and only two fundamental chemical properties, and that these properties resulted from the structure of the atoms. I therefore prepared a revised form of my earlier periodic table, showing the direction of change in activity and basicity, of the various elements in relation to each other and to their position in the table. In the discussion of the table, I suggested certain postulates that related these properties to the structure of atoms and showed that properties could be predicted with considerable accuracy from atomic structure. This paper was published in the Jour. Chem. Educ. for July, 1933 under the title, A Theoretical point of View in the Teaching of Inorganic Chemistry.

STUDENT RESEARCH

When we began the use of graduate assistants in our beginning chemistry courses, it became necessary also to provide adequate graduate work leading to an advanced degree. A part of the requirement for the Master of Science degree in chemistry consisted in the satisfactory completion of a research project running through at least one year and equivalent to at least six credit hours of work. The work was to be done under the supervision of a member of the senior staff. The primary purpose of this thesis course, as it was called, was to acquaint the student with the chemical literature and to teach him the methods of chemical research. These projects consisted, for the most part, of a single phase or step in a larger or more extensive project being investigated by the supervisor. Occasionally, however, the work was of sufficient accuracy and completeness to warrant publication, in which case the student's name was included as co-author.

The first one of this kind, completed under my supervision, was the first paper in the series of publications on the fusion of

rare metal ores, co-authored with L. L. Quill who obtained the M.S. degree in chemistry in 1925. A second paper similarly done was with Fred Lohse on The Reaction: Tungstic Oxide-Carbon-Chlorine, published in Jour. Amer. Chem. Soc. for May 1935. A third paper with Helen Gung, on the Use of a Color Indicator in the Tannin Method for the Determination of Beryllium and Aluminum was published in the Analytical Edition of Indus. and Eng. Chem. for Sept. 1944.

THE DEANSHIP

We had not been in our new building more than two or three years when Dr. Adams' health began to show the strain of too much work. He was granted a semester's leave of absence to recuperate and I was appointed Acting Dean of the College of Arts and Science for the period of his absence. This was a new experience for me, one in which I was brought into close contact not only with students having little or no business in college, but also with the not too unselfish faculty members. It was an interesting experience however, and one I was glad to have had, but not one I thought I would really enjoy over a long period. The old saying that "a miss is as good as a mile" was what I was to experience in connection with the deanship some three or four years later, when President Clark suffered a quite severe and sudden nervous breakdown and had to retire at once from active duty. It was on the next day following this situation that Dr. Adams and I had accompanied the student Chemistry Club on a picnic at Bowers Mansion, some twenty miles south of town. While there, he told me of the situation, also that one of the regents had asked him if he would be willing to take over as acting president. He then asked me if I would accept the deanship in case he were called upon to assume the president's duties. My reply was to the effect that I would rather hate to give up my position in the department of chemistry but if he wished me to be dean of the College of Arts and Science I would be willing to serve. On our return from the picnic that evening, we learned that the regents had met and selected the heads of two other departments for these positions, the reason being, they told Dr. Adams, they had been

advised by his physician that his health would not stand up under the responsibilities and heavy work required of the University president. The action of the regents came as a surprise to many of the older faculty members. It also marked the beginning of a series of a half dozen or so short-term presidents, each of whom contributed his bit, but for one reason or another, resigned from the position after a very few years. In view of this all too rapid turnover, I was quite satisfied to have retained my departmental position and to have missed the deanship.

It was at about this time that I completed the manuscript for my second textbook entitled Essentials of General Chemistry. This book was published by International Textbook Company in 1939. The following year with the assistance of Dr. M. W. Deming of the Chemistry Department, I prepared the manuscript for A Laboratory Manual of General Chemistry. It was submitted to the same company and was published in 1940.

NATIONAL DEFENSE AND STATE PROJECTS

It was in December, 1940 that I received a letter from Dr. Edward Mack, Jr. then chairman of the National Research Council's committee on Chemistry and Chemical Technology, urging our Department of Chemistry to join with the Committee, in the study of a problem connected with the National Defense. Our part of the work was to be a study of the effect produced on the melting point of ammonium nitrate by the addition of certain compounds in various proportions. The work was to be treated as confidential and might involve some danger. We should therefore wear goggles and work behind safety glass. I took the matter up with my department staff and with President Hartman of the University. All agreed that we should offer to join in the study. Dr. L. R. Williams, a young man of one year's standing in the Department, and I would do the work and the University comptroller would furnish the necessary equipment and liability insurance. I therefore accepted the committee's request and Dr. Williams and I spent the remainder of that school year on the

study, under the committee's general direction. The study included melting-point data on ammonium nitrate mixed with various concentrations of sodium nitrate, methyl urea nitrate, naphthalene and benzoic acid, ethylenediamine hydrochloride, and guanadine nitrate. Studies were also made of the hydropicity of methyl urea and of the eutectic mixture, ammonium nitrate-guanadine nitrate. Although we never learned to what use the overall results were put, we did receive letters of appreciation with thanks for our "substantial contribution" from those in charge of the larger project.

The second World War had demonstrated the structural value of magnesium, especially useful in the airplane industry because of its weight-strength ratio. However, it was a chemically active metal and hence subject to rapid corrosion. The people of Nevada had noted the economic value of the big magnesium reduction plant in the southern part of the state as a war operation, and wanted to retain it as a peacetime enterprise. The University was being looked upon for assistance. The result was a second study by Dr. Williams and myself, this time on the value of various commercial protective coatings on sheet magnesium, against weathering. This study was carried on during the winter of 1946-1947 and the results were published in the April 1947 issue of *Light Metal Age*. We obtained some very interesting and possibly useful results as well as learning something more ourselves about corrosion chemistry. Even so, it accomplished nothing toward the retention of the big magnesium reduction plant, since the method employed by it was unable to compete in the open market. However, the buildings were later occupied by other chemical manufacturing companies.

COMMITTEE ASSIGNMENTS

There are many problems connected with a university, especially one that is in the early stages of development, that are best solved through study, recommendation and often administration by faculty committees. I had not been very long at the University of Nevada before I found myself a member and then

chairman of the University's Entrance and Advanced Standing Committee. In this position I was brought into direct contact with the quality of students entering the University, the general character of the high schools from which they came, and something of the character of its transfer students. Having acted as chairman of this committee for some twelve or fifteen years, I learned a good deal about the State's public school system and the problems a state university encounters in its attempts to prepare youth for useful and worth while adulthood. Having spent so many years on this committee, I felt that I should be relieved from this responsibility and made a request to that effect. The relief was given but I soon found myself on a newly appointed Graduate Committee whose function was the standardization of the University's graduate study program, which had been slowly developing in various departments and colleges. My connection with this committee extended through a period of some five or six years, then followed the committee on Scholarships and Prizes, the chief purpose of which was the awarding, to worthy students, of the numerous scholarships and prizes that had been made available to the University over a period of many years. As I look back through the years I seem to remember very few during which I didn't serve on one or the other of these three committees.

In addition to these regular University committees, I was called upon to serve on a good many special committees, having to do with various faculty organizations and activities. I mention here only a few of the more important of these. The Faculty Science Club, in existence on the campus when I came to Nevada was beginning to show signs of lack of interest on the part of many of its members and by 1936, it was attended and kept alive almost wholly by the few actively engaged in research. At one of its meetings that year, the question of its real value as a faculty organization, was brought up for discussion. The result of this discussion was the appointment of a committee of which I was made chairman, "to obtain the attitude of the faculty toward the organization." A general poll of the faculty showed that a very considerable number would be interested in a more general organization, meeting less often and at night. There were some, however, who expressed little interest in this general type of

organization, but would be interested in a true science organization. Of the latter group, most were members of the Society of Sigma Xi. Some of these suggested that a Sigma Xi Club might fill this need.

The immediate result of this survey was the formation of the University Faculty Club with meetings once a month with faculty wives included. Its function was to be both educational and social. Its meetings included an address of general interest, usually by a faculty member, followed by a social hour with refreshments. From the beginning this organization was successful in bringing the whole faculty together on an equality standing and in keeping its various members acquainted with the accomplishments as well as problems of the different schools and colleges. And throughout my active years at the University, it continued to supply the much needed service of binding the faculty together.

It was not until the fall of 1939, however, when some half dozen young Ph.D. men, members of the Society of Sigma Xi, joined our science departments, that we were able to comply with all the requirements for a Sigma Xi Club. At our first meeting as an authorized Sigma Xi Club, it was voted to hold regular monthly meetings during the school year, at which reports of research being done by the various members would be given. It was hoped that these meetings would not only develop an increasing interest in research on the campus but would also serve as an added stimulus for those actively engaged in research projects. In the opinion of the Club members, both of these were needed for the proper development of the University and the quality of its academic position.

The newly organized Sigma Xi Club began its meetings in an atmosphere of enthusiasm, and for some time, limited its programs to the presentation and discussion of the research being done by its members. It soon began to grow both in numbers and in its influence for research on the campus. By the time of its one hundredth meeting in January 1956, its membership had been more than doubled and research interest on the

campus had been materially increased. It seemed to the members, therefore, an opportune time to celebrate this one hundredth meeting in a way that would bring the Club's activities before the public, and if possible, a public pronouncement by the University Administration of its attitude and that of the University regents toward general faculty research. Although I had been retired from active duties on the faculty for some five or more years, I had maintained active membership in the Club, and was asked to head the committee on arrangements for this celebration. The committee suggested a dinner meeting, to include the wives of members, President and Mrs. Stout of the University, and Mr. and Mrs. Laxalt publicity director of the University. The principal speaker of the evening would be President Stout who would discuss The Place of Research at the University as seen by the administration and the regents, this to be preceded by short reviews on the function of The Society of Sigma Xi, the founding of our local Sigma Xi Club and something of its accomplishments up to that time. President Stout, as well as the other chief speakers paid tribute to me as having been the one most instrumental in the formation of the club. It was a very satisfactory meeting to the Club members, and served to publicize that both regents and University Administration looked upon research as an important function of the University and that they would do all they could to increase its effectiveness on the campus.

The meeting also served as a means of publicizing the activities of our Sigma Xi Club and the standing of The Society of Sigma Xi, as a general university research organization. It was the Club's purpose and the Committee's hope, in arranging for the celebration that this publicity would result, and that it would thus produce an increased research interest on the campus and through the state.

One other special University committee may well deserve mention in this connection. The first post-war meeting of the Pacific Division of the American Association for the Advancement of Science was to be held on our campus in June

1946. President Moseley of our University asked me to head the General Local Committee on Arrangements. I was particularly interested in this meeting, not only for the inspirational boost it could bring to our local chemistry group but also for the values to the University that would result from a successful meeting of the wide variety of scientists that might be expected to attend.

In order to obtain as wide support and interest among the faculty as possible, we began by asking each member of the General Committee to act as chairman of a subcommittee. In this way we obtained a wide distribution of the work involved and a large porportion of the faculty directly interested in making the meeting a success. During the three or four months preceding the meeting, a good deal of my time was taken up in correspondence with the officers of the Pacific Division relative to the program, including special lectures, cooperating societies, etc., and in consultations with the various local subcommittees. It all seemed to have paid off, however, as our final records showed twelve cooperating societies, each with its special program, and a total of 305 registrations, 250 of which were from outside Reno. In addition to the special programs, there were three evening lectures of wider interest, two full day trips to points of interest around Reno and a general reception by President and Mrs. Moseley, all of which were well attended and apparently enjoyed by the participants.

In addition to these and other University committees, which seemed to be an integral part of my career, there was also a special committee of the American Chemical Society, with which I was connected during the years 1939 and 1940 that deserves mention because of its wide-spread influence on chemical education. Industrial research and development had been gradually increasing and spreading throughout the Country. Its need for better trained chemistry students at the college level was beginning to be felt. The American Chemical Society, believing this to be a problem it might help solve, appointed a committee on Professional Training of Chemists. The Committee began with a careful study of the problem, the result of which was the

establishment of certain desirable educational standards for departments of chemistry that might wish to prepare their students for careers in the field of chemistry. In order to give this idea wide publicity and enhance its value, the Society offered to accredit, without cost to the institution, the chemistry departments of those universities and colleges, that were able and willing to provide for this educational standard.

An educational institution desiring accreditation would need to make formal request, fill out a questionnaire giving information concerning its chemistry teaching staff, its laboratory and library facilities and finally receive a personal inspection. It was in this latter capacity that I was asked to serve. The original plan of the Committee had been to send a team of two inspectors, and my first assignment was with the chemistry department head at the University of Kansas. Our assignment was to observe and report on pertinent conditions at Brigham Young University in Utah. While this was a very pleasant and enjoyable trip with my team-mate from Kansas, our joint report to the Committee was probably little or no different from what either one of us might have made. At any rate, the Committee soon decided the extra expense of sending a team was unjustified and unnecessary, and the remainder of my inspection trips were made alone. These were at Mills College, University of San Francisco and Santa Clara University, all in the San Francisco Bay region. One other trip was made to a small college in Helena, Montana. I was very glad to be of service in this undertaking not only for its personal value to me but also for the stimulus it seemed to bring to the profession. In this connection, I may add that our own University made application, was inspected by a Stanford University representative and received accreditation. Its value has been to strengthen our department of chemistry, add to its prestige both on and off the campus, and to keep its teaching staff alert to the maintainance of those standards through the periodic inspections made since then, by representatives of the Committee.

PART IV

RETIREMENT ACTIVITIES

Perhaps it was my early training on the farm that seemed always to draw me into our garden as the early spring sunshine began to warm the outside air and the grass began to show green. Perhaps, however, it was just that my school work had kept me in the classroom or laboratory all through the winter months that made the spring sunshine so inviting. Whatever the cause, I had always enjoyed my garden work and still do. It served me well, through the years, as a means of relaxation, recreation and change of activity. I could never think of the garden, however, as of sufficient interest and activity for my retirement years. There would of course be some unfinished research I would want to complete during the first few years, and some travel we hoped. There would also be the care of property we had gradually acquired through the years and a lot of reading I had not been able to do. We would of course retain our interest and connection in the various university and community organizations, for we expected to continue our life as usual in that respect. Retirement, therefore, was welcomed as relief from routine and for its change of activity.

OFFICE OF NAVAL RESEARCH CONTRACT

In January 1948, the year preceding my retirement from active teaching duties, President Moseley received a letter from the Office of Naval Research, announcing its financial support of certain types of research projects and asking that outlines be sent in for any such projects the University might

care to recommend. The letter was sent to me for review and action if desirable. As a result of this communication, the University entered into a contract with the Office of Naval Research for the continuance of my work on the problem of a separation of tantalum from columbium, about which there was then a good deal of interest because of the importance of tantalum, in its relation to modern weapons. The contract would give me some needed chemicals and apparatus and a graduate assistant to help with the laboratory work. It also seemed to promise an immediate interest for my retirement which was just around the corner. The problem was one on which I had already done considerable work without finding a satisfactory answer. The method I had been using, however, seemed to have promise of the desired separation if the exact chemical changes involved could be determined and the proper technique be found. The contract continued in effect until March 1951, when I sent in my final report, suggesting that certain chemical changes, vital to the separation, showed indications of an overlapping which could prevent a practical separation.

Although we had been able to establish a number of facts concerning the procedure and most of the chemistry involved, we had not been able to find a set of conditions under which a complete separation could be assured. The question of why we could obtain satisfactory separations sometimes, but not every time, still remained. It was for my own satisfaction concerning this question, that I continued work on the problem during the next few years. I finally found that the answer lay in the decomposition rates of the compounds formed during a fusion process, essential to the separation. This could result in an overlapping of decomposition temperatures. The overlapping was found to depend on the relative proportions of the two elements in the sample, the flux-oxide ratio and the size of the sample. All of these findings were interesting facts about the elements, but destroyed the process as a practical means of separating them. However, it had been an interesting problem as well as one illustrating the uncertainties of chemical research.

AT DEEP SPRINGS SCHOOL

In the early spring of 1950, I received an invitation to join the staff of a privately endowed leadership-training school as visiting professor of chemistry. The position called for giving a year's course in general chemistry to a small select group of young men just out of high school. The school's objective, its care in the selection of students and its unique setting in a small isolated valley of southern California, seemed to offer me the opportunity of testing the adaptability of the atomic approach to general chemistry rather than following the usual historical approach of the textbooks of that time. I had been using such an approach in a more advanced course with very good results, and believed it could be adapted to beginning work with equally good results. Since the atom had now become a relatively familiar term, and its general structure was pretty well established, I felt very sure that a proper discussion of this at the beginning of the course in general chemistry could develop an initial interest in the course that otherwise had so often been lacking. I also believed that this interest could be maintained by showing how properties result from atomic structure. With this idea as a foundation, the whole subject of general chemistry could be developed as a natural sequence.

Before accepting the position, however, we went down to Deep Springs for a look at the school, and to learn something of the character of its students, and the facilities for their instruction. We also wanted a closer look at the general living conditions, since we were to live on the campus and take our meals at the central dining room with the students. While there, we learned that the school's endowment was invested largely in a herd of cattle, used as a source of income and as a means of practical leadership training for the students.

The school had been designed for twenty five students and had about twenty in attendance that year, of whom I was to have seven in my chemistry section. The length of term was three

months. To lead this group of boys through a year's course of general chemistry in that time was somewhat of a challenge. But after meeting and talking with some of them, I considered the atomic approach to the subject would help meet that challenge. Acceptance of the position would of course break into my Navy research project but should not seriously affect it, since my assistant would continue with the experimental work. I accepted the teaching position, therefore, and made arrangements for getting the necessary books and laboratory materials.

We returned to Deep Springs early in March to begin the course with a discussion of atomic structure. To me it was an interesting experience and I felt quite sure the students were enjoying the work and were grasping its significance. The course, as I anticipated, was quite concentrated but not dull. Most of the boys did excellent work and all showed very satisfactory interest in the course. To me it was a successful experiment of a teaching approach to the subject of General Chemistry, as well as one that showed the value of a truly logical development of the subject matter.

Some months after I had completed the course and had returned home, I received a letter from the school's secretary and house mother to the boys, in which she told me of the various activities and where-about's of the boys since leaving the school, and enclosed a letter she had received from one of them. In this letter the boy had told her of his entering Harvard University as a premedic student, a course involving considerable work in chemistry. Concerning his chemistry work at Deep Springs, he said:

The chemistry course that Dr. Sears gave at Deep Springs got me very much interested in chemistry. This was a strange interest for me because in high school I disliked chemistry very much. I think Dr. Sears was an excellent teacher. I've had several teachers who were very good in their field and knew their subjects thoroughly, but rarely, very rarely, have I had men who knew how to teach very well and who could stimulate a student's interest.

I was of course gratified to get this objective comment on an approach to the study of chemistry I had believed practical. I had considered this young man one of the better students in the class, but had not realized he had begun the course with a dislike for the subject.

A second objective expression of the value of this type of educational research was obtained some years later when I received letters from our own University of Nevada president and from the president of the Manufacturing Chemists Association, informing me that on the initiative of my former colleagues in the Department of Chemistry, the University of Nevada had nominated me to receive one of the six 1959 College Chemistry Teacher Awards, being given by the Manufacturing Chemists Association "to honor the men and women engaged in college science teaching; to call public attention to the importance of good science teaching at the undergraduate level; and to inspire qualified students to choose careers in science teaching. While I greatly appreciated this tribute to my work as a teacher, I could account for it only as a result of the educational research I had been able to do. It was a type of work I greatly enjoyed and that fit in well with my teaching, and it was work I had thought from the beginning of my career was much needed.

OUR NEW HOME

Almost from the time we left our old home on Virginia street in 1943 for the newer home we had recently built on Hillside Drive, we had been working on plans for what was to be our new home on Alta street, overlooking almost the whole of Reno. Because of the prolonged war effort and the rising costs of almost everything, we found it impractical to begin building until 1950, when I would be free to manage the project and thus save the cost of a general contractor. Of course, our acceptance of the Deep Springs teaching position delayed our start of the building until our return home in early June. Quite early in the year, however, I had consulted with a young architect, in whom I had confidence and who was well acquainted with

the local building tradesmen, and had been able with his advice to secure the services of a reliable head carpenter and the necessary sub-contractors. We were thus able to start the construction work soon after the first of June.

I certainly didn't lack for something to do that summer. However, it was a very interesting experience as I watched the building slowly rise to completion. We had spent so much time working out the plans and living with them, that there were few changes made in them during the construction and very few, even now that we have lived in it, that we would make if we had it to do again.

It was an enjoyable though a rather strenuous summer. I learned a great deal about the details of construction, a good deal about the laws governing the building trades, the various costs connected with it and the paper work involved. I was glad to see it completed for we had been looking forward to that house as our future home. Although I had enjoyed the experience connected with its building, I did not think that type of work would ever have appealed to me as a vocation, even though I had always been interested in architectural design. We moved into the new house shortly before Christmas of that year, and have continued to enjoy its conveniences and the view ever since.

CONCERNING OUR FINANCES

The story of a man's life in a democracy such as ours, is incomplete without some mention of how he handled his financial obligations. In accepting the position to teach that first term of school in the spring of 1901, I took upon myself the responsibility for any further education I would get. I realized I would no longer depend on the farm with which I was most familiar, but would use the means at hand to further my education as far as possible, then make use of it in the making and maintaining of my future career. By that act also I had set education as my first goal. From then on and for more years than I had thought possible, the money I earned was for that purpose and with that end in view. I was not averse to borrowing when necessary to attain a

certain goal. I was always confident that I could earn more with the added education than without it. I followed that general principle all through the period of my student life, yet was never greatly in debt at any time. Being of a conservative nature, I earned as I learned, and found it much easier to obtain the means of earning than I had anticipated.

By the time I had completed my formal education and was at the beginning of my career as a university instructor, Edith and I had found it possible to begin our married life and the building of our own home. Our goal was a comfortable home, with friends, family and a successful career. Toward that end, we made it a part of our plan to lay aside regularly a portion of my salary for that special occasion we knew might come unexpectedly. Realizing that for some years, this amount could not be very large, we began by deposits each month in a building and loan association. Our investment in this institution, though small, would be available in case of need and would earn a fair rate of interest. We continued this type of investment throughout our stay at the University of Illinois, during which we had put aside a sufficient amount to take us across the country to Nevada and get us well established there.

We had not been at the University of Nevada long before we came to realize that the State's very small population in proportion to its size, and the cost of its full state and county governments, its university and public school system, must necessitate a pretty heavy tax burden, even though the per capita income was reputed to be among the highest in the nation, and that because of this, it had introduced some rather unusual methods of attracting out-of-state people to establish residence in the state. Notable among these were the easy divorce laws, the absence of so-called nuisance taxes as well as bonded indebtedness enabling it to boast of itself as the "one sound state."

Through these inducements, many wealthy individuals as well as others had come into the state, some of them establishing permanent residence even though their business was in

another state. While these various conditions doubtless added considerably to the state's taxable property, they did not prevent the legislature from keeping a tight rein on university costs through most of the years I was in active service. That this rein was for the most part too tight was shown in the facts that salary increases generally lagged behind promotions in rank and that the salary scale was in general lower than that at other comparable state universities. However, there were other factors that did much to compensate for the lower salary scale. In the first place, my promotions through to full professor and department headship came early and in fairly rapid succession. Very soon also, the invigorating climate, the abundant sunshine and the very cordial and democratic atmosphere on the University campus and among the townspeople became a factor in our decisions about leaving Reno for a position elsewhere. All of these things seemed most favorable to congenial working conditions and to a pleasant life.

Realizing this general economic condition in Nevada we did not look forward to any greatly increased salary scale if we should remain in the University. It therefore seemed to us that we should continue our policy of laying aside a part of my salary as a cushion or reserve. The local building and loan association had the policy then of getting its capital through the sale of shares, to be paid for by the month for a period of years, during which each share would build up to a predetermined sum, an amount sufficiently in excess of the cost to show a quite satisfactory income. The organization seemed to have a very good reputation. It also appeared to be well suited to our condition and to our purpose of building up our own reserve for that possible emergency or opportunity that might come unexpectedly. We began, therefore, by investing a small sum in it, and then increasing the amount from time to time as we found it possible. Through the years I was able to supplement my salary somewhat through some consulting work and income publications, although neither of these ever netted a great deal.

When we first came to Nevada, we found it possible to rent a quite satisfactory cottage conveniently located near the University where we hoped to remain for a few years or until we should feel more permanently established. However, we had been there less than two years when our landlord informed us that he had given the place to his daughter who was getting married and would want it for their home. Although we didn't realize it just then, having to give up this cottage led directly and quite unexpectedly to our first real financial emergency. The United States had just entered the first World War, and when we began to look about for another place, we very soon found if we were to have a home we would have to buy it. We were able to do this by using the money we had saved and borrowing the balance. However, if we had needed a practical demonstration of the value of a financial cushion, this was it. We continued, therefore, with our building and loan investment, increasing the amount as we found it possible. We still make use of it as a practical savings account for the accumulation of sufficient funds for practical investment or for things needed or wanted.

In 1928, we drew from this fund for a lot at Lake Tahoe and for the building of our summer cottage on it, and in 1933, for new furnishings in our home and for a trip to the Chicago World's Fair. It was not until 1939, however, that we were able to locate a more promising and more desirable investment than the building and loan association had been for us. Some twenty or more years before this, a group of faculty men from the universities of California and Nevada including a few professional men in Reno, had formed a cooperative olive growers association, had planted some 500 acres of olive trees near Oroville, California, and had established a cannery for processing the olives for the wholesale market. The work of caring for the acreage and harvesting the crop was handled by a board of directors through a farm manager. The cannery was handled similarly but as a separate organization. It was these organizations that I was given the opportunity of joining, through the purchase of a small acreage of olive orchard which included an interest in the cannery. This investment has not only been a

very satisfactory income producer through the years, but it has given me some knowledge of the olive industry, some experience in practical economics and has furnished me with a pleasant business association. Although our financial interest in this cooperative has been relatively small, I have kept in close touch with its operation and have served on its board of directors.

During the period of the Second World War and for a short time following it, we made regular investments in U.S. savings bonds. This was perhaps done more with the idea of carrying our share of the war load than with any thought of much profit. However, we had not anticipated the radical changes in the Country's economic conditions, that were to occur through inflation, by the time the bonds were scheduled to mature; changes of such character that the purchasing power of a bond at maturity was even less than its original cost some ten or twelve years before. Since my retirement from active service at the University, most of this money has been invested in common stocks that may be expected to keep pace with inflation. In this, as in the case of the olives, I am finding an interesting and, so far, profitable occupation for myself.

At about the same time that we acquired the olive property, we purchased an unusually large building site in Reno, very nicely located on rising ground in a new residential section and facing on two different streets. On this we have since built two houses, one for our own home in which we now live, and the other which we are keeping for rental purposes. With the assistance of these various investments, we have been able through the years to live comfortably, see much of the United States, give our children a college education, see them happily married and in their own homes, assisting them with financial aid when they needed it most, and with it all have an interesting activity for our own retirement years. We have not accumulated a large estate nor do we feel particularly cramped for funds.

PART V

IN RETROSPECT

As I look back into the years of my boyhood with its glimpse of the America that existed when my parents were in their prime, I am made very much aware of the great change that has taken place in our American life since my father started out as a young man. In the preceding story, I have referred to these changes only as they have affected my own experiences, in the belief that the reader would thus obtain a truer picture of the man whose life was being portrayed. However, since the over-all change has been so sweeping and so far-reaching in its effects upon the people, it seemed that some further comment in retrospect would give the reader a clearer understanding of the extent of this change and perhaps a clearer idea of the forces involved.

This change, though more or less gradual and coming along as it has with our increasing population and with the developments in science and technology, has not only affected our habits and our ways of living, but has extended well into our ways of thinking, our attitudes toward life and even into our philosophy of life. We have been made to wonder, therefore, what have been the chief contributing factors causing the change and to what end they are leading.

It is true that science has made tremendous strides during this time, probably as much as in all the centuries preceding. It is also true that our Country had passed through two world wars during my life time and even now is in the midst of what is being called a "cold war." Certainly each of these has left its mark on the lives of our people.

When my father left his home in New York state for the great West in 1856, he was able to secure passage by boat and railway train only as far as the Mississippi River. From there on across the great plains and through the mountains, he had to provide his own means of transportation. Since that time, there have come into common use the great network of railways, the automobile and the airplane. These were made possible only through the developments in science, but became realities through the desire and will of men to have them. The first transcontinental railroad was completed in 1862. The automobile and airplane made their first appearance around the turn of the century, have passed through their experimental stages and are now well established transport media.

It was during the 1890's that newspapers began using big headlines to emphasize the spectacular, in an effort to increase their circulation. Historians tell us this had much to do with getting the United States into the Spanish-American war (1898). Although the war was soon over, it brought the Philippines, Hawaii and Puerto Rico under American jurisdiction, freed Cuba from Spain and greatly changed the thinking of the American people. It also marked an important rise in the standing of the United States among nations. The average American citizen, almost for the first time, became aware of the world outside of America.

Along with the better methods of transportation and the wider interest in peoples, came an increased desire for travel. As travel increased the small self-sustaining communities, such as that into which I was born, began to disappear. With their disappearance came an increased desire for knowledge. High schools and the consolidated grade schools began to displace those of the one-teacher ungraded type. State universities grew stronger, became more widely known, better attended and gradually displaced many of the small liberal arts colleges that had come into being, particularly in the Middle West. For the general campus atmosphere of learning "how to live," emphasized in these colleges, there was substituted in the state universities that of learning "how to make a living." While this change

of emphasis may have come because of the general American concept of separation of church and state, or because of the general occupational shift toward industry, or perhaps through a combination of these, there has been going on through the years a gradual change of emphasis in education that has penetrated down through the university into the public school system. While this change of emphasis toward the economic seems to have begun with the university's division into colleges, there was no apparent attempt to de-emphasize the fundamental subjects, essential to good serviceable living in a democratic society. However, as this change of emphasis has spread through the university curriculum and has filtered down through the high schools and even into the junior grades, many additional subjects have been added as possible substitutes for various ones of those courses which had long been considered as basic for the development of judgment, clear thinking and even for good citizenship. In justification of these added courses, it has been suggested by certain groups of school men, that the primary function of secondary schools, is to prepare the youth for entrance into adult society.

Along with the developments in science the United States has been undergoing a gradual change from a nation of farmers to one of industry. It has been estimated that the farm population has decreased, during the period of my life, from around 80 to 85 per cent of the total population, to less than 40 per cent and is likely to continue this decrease for some time yet. Relatively early in this shift, the problem of child labor arose as a threat to education, the one thing this country has always considered essential to the preservation of its democracy. Consequently, laws were enacted against such employment and also for a better and longer school attendance. Almost immediately the public schools were faced with a difficult problem. Since the law provided that all children must remain in school until they were sixteen years of age, it was soon found that a considerable number of them were either unable or unwilling to do creditable work in the regular long established courses of study, courses that had been looked upon as fundamental to clear thinking, a quality of prime importance in a democracy.

The solution of this school attendance problem seemed to lie in an extension of the school curriculum to include certain vocational subjects, in which the learning of skills might be substituted for certain of those basic courses. However, the school curriculum has continued to expand to include most of the trade school vocations and, more recently, a beginning in the field of school and social activities. May we not soon begin to wonder why the need for so many of these added courses and for such a wide variety of them?

For some time, university faculties have been complaining that too many students come to them ill prepared for the more advanced university work. Especially had this been true in the fields of science and engineering, in which there has been and still is a scarcity of new applicants for the needs of our growing industries. There have also begun to appear signs of uneasiness in the general public that all is not well with the training being given to our youth, that there is too much disinclination among them to master the more difficult subject matter and too great a tendency to shun responsibility. Again the question arises as to the reason for these apparent deficiencies among our youth. To what extent may our public school system be responsible, to what extent, the home and, to what extent the society in which we live? It is of course true that one does not achieve clear thinking, good reasoning ability or even the desire to take responsibility without the basic knowledge fundamental to these things. This basic knowledge cannot be had without concentrated effort and study. Is it possible that too many of our youth have been taking the easier way through our secondary schools? If so, why?

Along about the time of the first World War, certain changes began to appear in the thinking of the American people. Advances in science had uncovered so much evidence in support of the theory of evolution that the general public began to understand and recognize its meaning. There were many to whom it was just some more information concerning the origin of life. There were some, however, to whom it brought only confusion while others rejected it as inconsistent with Bible teaching. In certain areas, even its teaching in the public schools became an

issue. In the midst of this more or less disturbing information as to man's origin, and just prior to America's entry into the war, President Wilson made public pronouncement of his "fourteen points," setting forth some of our American idealism and the reasons for America's concern with the war. Later at the signing of the armistice on Nov. 11, 1918, it was generally assumed that the peace treaty would be based on those "fourteen points." However, during the discussions concerning the requirements that would be exacted from the central powers, there was in evidence among the European allies, so much hate, bitterness and demand for reparations that most of the humanitarian idealism suggested in the "fourteen points" was disregarded. The result was a new division of Europe, based on the old balance of power idea. The American soldiers, in Europe, were so disgusted with this selfish European attitude that many of them returned home full of disillusionment and with little or no good feeling for their European allies. Furthermore, they came home to a people disturbed and divided in their beliefs about life. The result was a general lowering of moral standards, a let-down in home training and a very noticeable drift toward materialism; a general situation, ripe for the subversive communism that soon began to show itself.

The interim between World Wars I and II became a period of instability both in governmental affairs and in the general public. Our government swung from an attitude of liberality filled with graft under Harding to extreme conservatism under Coolidge. This was followed by the financial crash in 1929 and the depression of the early thirties. It was also during this period that the prohibition (1919) and woman's suffrage (1920) amendments were added to the constitution, the period in which Lindberg flew the Atlantic (1927) and the moving picture industry began to flourish in southern California. The struggle of the general public for harmony between the findings of science and what had been considered as fact concerning the origin of man continued for some time as a disturbing influence. Following the famous Scopes trial and the passing of William Jennings Bryan (1925), it ceased to be a public question. However, there were those who apparently disregarded the theory of evolution and continued their fundamentalist belief in the literal interpretation of the Bible. Others were able to find

harmony between science and religion in a realization that the great truths of the Bible remain unchanged, but that the Bible was written by men and therefore should be interpreted in the light of the times and of the men who wrote it.

In the midst of this confusion and general instability, a considerable change was taking place within the home. The demands of war had brought a good many women into employment outside the home. This exodus tended to increase rather than decrease when the soldiers returned from Europe. Home supervision decreased and this only added to the confusion. The apparent result was a wide-spread breakdown in the home and a general lowering of moral standards throughout the Country. Following the financial crisis of 1929, and to overcome the depression that followed, the government began to emphasize "security" as a goal of American life instead of the older "opportunity" incentive. Taxation against wealth was greatly increased and labor forces were encouraged to combine for their own protection and benefit. Government spending for "make work" was greatly increased to provide employment. Social security laws were enacted as a substitute for the savings account that had been used by the more thrifty. Encouragement was given the general public to spend more and save less, with the idea that it would keep more money in circulation and thus be an aid to prosperity.

In the midst of these things, the power of labor unions was increasing, the result of which brought fewer working hours, an increased pay check and with more time to spend in recreation or work around the home. Science and technology had begun to enter the home with a variety of labor saving home appliances, commercially packaged frozen foods, the radio and television. The result was less work available around the home to be done and more entertainment with its accompanying advertising inducements to buy.

In the midst of these changing conditions, there came the second World War, first in Europe but finally to America, following the sudden attack on Pearl Harbor on Dec. 7, 1941. This

brought large numbers of both men and women into the armed forces as well as into industry. It also brought communist Russia onto the side of the Western democracies. And it brought many disturbing factors that were left to be settled after the war. The subversive influence of Communism with its glowing picture of materialistic idealism, but with little or no regard for truth, had spread through the Country even before the war had begun. This same Communism with the addition of what is being called the "cold war" still exists as a formidable threat not only to our democratic form of government but also to the whole free world. There is also among us an ever increasing amount of teenage unrest and juvenile delinquency that appears to be almost out of hand in many of our large cities and even in a good many of our high schools.

In addition to these problems, for which solutions have not as yet been found, other forces affecting the youth of our nation have come from changes in our mode of living and in our ways of thinking. The wave of so-called "progressive" education, with its emphasis against inhibiting the child, was for a time quite wide-spread in our public school system, especially in some of the eastern states. While this was carried to an unwarranted extreme, it was found to be a hindrance rather than a help in their later preparation for many industrial positions. James F. Byrnes, secretary of state during President Truman's administration said "too many people are thinking of security instead of opportunity." It appears questionable, therefore, whether these solutions for our economic and school problems have been effective.

Perhaps it is time to take stock of the solutions that have been applied not only to our economic and school problems but also those involving the home and moral standards. It may be that our over-emphasis of freedom of action for our children and of security for all has lulled too many into an attitude of complacency. It may also be possible that, as a people, we have become so liberal in our thinking and in our philosophy of life, that too many of our youth are reaching the age of adults without having discarded the self-centered attitude of their

childhood. In other words, are we as a nation slowly becoming less concerned about our independence and the democracy that has made America great? Are we as a nation slowly drifting into a form of socialism which can so easily develop into Communism and autocratic rule? Was the historian, James Truslow Adams, correct when he said that education was tending to become utilitarian or aimless, and that we tend to lose sight of the past in hopes for the future?

The answer to all these questions must lie with the future and the actions of future generations. Democracy, as we have known it through the years, can continue its existence only so long as its people care enough for it to keep themselves informed, and to vote intelligently with wisdom and for the common good.

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